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Ecological Assessment

470 Rochedale Road, Rochedale

October 2026

BC-26073

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Project Name	470 Rochedale Road, Rochedale
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Report Title	Ecological Assessment
Author	Nadya Lees BSc (Hons)
Field personnel	Nadya Lees BSc (Hons)
Reviewed	Lexi Brownhall BEnvSc
Approved	Brad Comley MSc, BAppSc, MEngPrac, NER, RPEQ

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Biome Consulting Pty Ltd
ABN: 86 166 087 476

PO Box 3469, Southport Q 4215
Office: 5532 7779
Email: admin@BIOMEconsulting.com.au
Website: www.BIOMEconsulting.com.au

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Abbreviations and Definitions

Term	Meaning
ADR	Accepted Development Requirements
ALAN	Artificial Light at Night
AO	Acceptable Outcome – defined in the Environmental Significance Overlay Code
ASL	Above Sea Level
Category A	Land designated as having a particular regulatory status
Category B	Remnant vegetation – regulated under the VMA
Category C	Regrowth vegetation – regulated under the VMA
Category R	Regrowth watercourses – regulated under the VMA
Category X	Non-remnant vegetation – generally not regulated under the VMA
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
DETSI	Queensland Department of Environment, Tourism, Science and Innovation
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
Exotic Species	Refers to all species of both flora and fauna that are introduced to Australia.
Fauna	Refers to all animal species
Flora	Refers to all plant species
MLES	Matters of Local Environmental Significance
MNES	Matters of National Environmental Significance
MSES	Matters of State Environmental Significance
NCA	Queensland *Nature Conservation Act 1992*
Planning Scheme	City Plan v 37.00/2026
PO	Performance Outcome – defined in the Environmental Significance Overlay Code
RE	Regional Ecosystem. Defined as a vegetation community that is consistently associated with a particular combination of geology, landform, and soil.
SARA	State Assessment Referral Agency
The Code	Environmental Significance Overlay Code (under the City Plan)
The Site	470 Rochedale Road, Rochedale. Lot 2 RP97162
Threatened species	Species listed under the NCA or EPBC Act as having a conservation status of Near Threatened, Vulnerable, Endangered, or Critically Endangered.

Executive Summary

A multi-lot residential development is proposed over 470 Rochedale Road, Rochedale. The site was formerly a commercial nursery and has historically been cleared of native woody vegetation. Vegetation present on the site comprises exotic species and landscape specimens.

As a result of its historic use and land management practices, the environmental values of the site are low, as is also suggested by the lack of environmental overlays by either the State government or Brisbane City Council.

A Koala Habitat Impact Assessment has been prepared as an addendum to this report to determine the impacts associated with the proposed development in a Koala Priority Area and Broad Hectare Area.

Vegetation on the site has been surveyed, and results presented in a Tree Survey Plan included as an appendix to this report. While much of the vegetation on the site can be cleared under an exemption under the Natural Assets Local Law 2003, clearing of the balance will require a permit.

The development can comply with the provisions of the Biodiversity Areas Overlay Code and the environmental criteria of the Rochedale Urban Community Neighbourhood Plan.

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1 Introduction

A residential subdivision is proposed over 470 Rochedale Road, Rochedale.

This Ecological Assessment has been prepared to identify the environmental values present across the site and comprises both a desktop assessment and a field investigation. The findings of these assessments establish the baseline data used to evaluate the potential impacts of the proposed development on identified ecological values and to assess compliance with the Environmental Significance Overlay Code.

1.1 Report Outline

The preparation of this report included both a desktop assessment and a field survey.

1.1.1 Desktop Assessment

The desktop assessment involved:

- A review of the mapped matters of environmental significance;
- An assessment as to how matters of environmental significance influence the development of the site; and
- Interrogation of Commonwealth and State government protected matters and wildlife databases.

1.1.2 Field Survey

The field assessment was conducted on 27 October 2026 to determine:

- Vegetation communities present; and
- Assessment of potential habitat for threatened fauna.

2 Site Description

The subject site is formally known as Lot 2 on RP97162, with a street address of 470 Rochedale Road, Rochedale. It is zoned Emerging Community under the Brisbane City planning scheme, City Plan, Version 37.00/2026.

The location of the land in the local landscape is illustrated in Figure 2.1. It was formerly used as a commercial plant nursery, and infrastructure associated with this use (shade house, sheds, dwelling house) remains.

The site is situated immediately south of a cleared lot (formerly a commercial plant nursery and over which a development application is being assessed) and north of a residential development. Former small-scale agricultural enterprises are present to the west of Rochedale Road. Rural residential properties bound the site to the east.

A summary of the site details has been provided in Table 2.1.



Figure 2.1 Subject Site Location

Table 2.1 Site Overview

Site Details	
Lot/Plan	Lot 2 RP97162
Address	470 Rochedale Road, Rochedale
Area	21,711 m^2
Local government area	Brisbane City
Planning Scheme	City Plan Version 37.00/2026
Zone	Emerging Community
State Planning Constraints (Focus Area)	
Planning Regulation 2017	Koala Broad Hectare Area Koala Priority Area
Vegetation Management Act 1999	Category X Regulated Vegetation
Brisbane City Environmental Constraints	
Biodiversity Areas Overlay Code	Biodiversity areas – Koala habitat sub-category
Natural Assets Local Law 2003	Significant Urban Vegetation

2.1 Topography and Drainage

The site has very little variation in relief, sloping from south to north, with an elevation change from 73 m ASL to 71 m ASL.

Stormwater runoff is directed via overland flow to a constructed shallow drainage line on the lot to the immediate east.

2.2 Geology and Soils

The geology of the site is described as rolling to hilly terrain with gentle to moderate slopes.

The general description of the soils is hard pedal mottled-yellow duplex soils (Atlas of Australian Soils, Queensland Globe). Typical characteristics of these soils are a hard-setting surface when dry that can restrict water infiltration. When the surface cover is lost, the subsoils are prone to erosion.

3 Legislative and Environmental Planning Constraints

Matters of environmental significance are subject to federal, state, and local government legislative and planning frameworks. A review of legislation relevant to the planning and management of the focus area's mapped matters of environmental significance has been undertaken.

3.1 Zoning

Under the Brisbane City planning scheme, City Plan version 37.00/2026, the site is zoned Emerging Community.

3.2 Commonwealth Government

Referral to the Commonwealth government is required if significant residual impacts to Matters of National Environmental Significance (MNES) (as defined under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)) occur, such as impacts on Koala habitat or threatened ecological communities.

Because most MNES are not mapped, a field assessment is required to determine whether they are present.

Under the provisions of the EPBC Act, Part 3, Sections 18 and 18A, if a development proposal involves an action that is likely to result in a significant residual impact on any MNES, the proposal must be referred to the Australian Government Environment Minister for a determination as to whether the proposed development is a controlled action.

A discussion of MNES present and potentially impacted is presented in the following chapters.

3.3 Queensland State Government

The Queensland Government identifies and seeks to protect Matters of State Environmental Significance (MSES) through the State Planning Policy and relevant environmental and planning legislation. MSES comprise a range of environmental values, including protected areas, wetlands, regulated vegetation, and wildlife habitat. The *Planning Regulation 2017* establishes State assessment and referral requirements in relation to these environmental values.

The mapping available through Queensland Globe indicates the MSES that may be relevant to the proposed development. Mapped State environmental values on the site include the following:

- Koala Priority Area;
- Koala Broad Hectare Area; and
- Category X Regulated Vegetation.

The following information has been provided on how the above-listed MSES may influence the proposed development.

3.3.1 Koala Priority Area

The *Planning Regulation 2017*, Schedule 11, Part 2, applies only where a development is not also within a Koala Broad-hectare area.

3.3.2 Koala Broad-hectare Area

The entire site is located within a Koala Broad-hectare area.

Schedule 11, Part 3 of the *Planning Regulation* (development in identified broad-hectare areas) applies only where the development is assessable. However, it does not apply if the development results in a total area of 500 m^2 or less of Koala habitat areas being cleared of vegetation (Schedule 11, Part 3, Division 5(2)).

Koala habitat areas are those that are mapped as either Core Koala Habitat Areas or Locally Refined Koala Habitat Areas.

As the subject site is not mapped as having any Koala habitat areas, the broad-hectare assessment benchmarks outlined in Schedule 11, Part 3, do not apply.

No further assessment by the State Government is required.

3.3.3 Regulated Vegetation

Regulated vegetation is categorised as follows:

- Category A – land designated as having a particular regulatory status (e.g. offset area or subject to a restoration order);
- Category B – remnant vegetation;
- Category C – high-value regrowth vegetation;
- Category R – vegetation within 50 m of a watercourse or drainage feature in all Great Barrier Reef Catchments; and
- Category X – vegetation not mapped as Category A, B, C, or R.

Category X vegetation is mapped over the focus area.

Clearing of Regulated Vegetation can only be undertaken as:

- Exempt Clearing Work;
- Under the provisions of an accepted development clearing code; or
- For a relevant purpose under 22A of the *Vegetation Management Act 1999* (*Planning Regulation 2017*, Schedule 10, Part 3, Division 1, 4).

<u>Exempt Clearing Work</u>

Vegetation that is mapped as Category X under the *Vegetation Management Act 1999* can be cleared as Exempt Clearing Work under the *Planning Regulation 2017,* Schedule 21, Part 2, Section 2 (d).

It is important to note that the identification of clearing as Exempt Clearing Work does not mean that the clearing is exempt from assessment or approval under the planning scheme. The status of the clearing as Exempt Clearing Work should not be interpreted as removing or overriding other planning assessment requirements that may apply to the development.

3.4 Brisbane City

The City Plan identifies and seeks to protect and retain Brisbane City's biodiversity, waterway, and wetland values. The planning scheme's mapping layers identify the areas of environmental significance.

Relevant environmental values mapped over the site include:

- Biodiversity areas – Koala habitat sub-category.

Where a development proposes to impact the mapped values, the Acceptable Outcomes (AO) or Performance Outcomes (PO) of the Biodiversity Areas Overlay Code (the Code) will need to be addressed.

The relevant environmental provisions of the Rochedale Urban Community Neighbourhood Plan also apply to the site.

3.4.1 Koala Habitat Sub-category

Within the Koala Habitat biodiversity areas, development is to be located and designed to protect and enhance Koala habitat by minimising impacts on Koala habitat trees, providing connectivity and safe movement corridors, conserving habitat, and incorporating the planting of Koala habitat trees into the landscape design.

3.4.2 Rochedale Urban Community Neighbourhood Plan

Under the Rochedale Urban Community Neighbourhood Plan, significant vegetation is to be protected, and the development footprint is not to adversely impact Koalas and their habitat. Unrestricted movement of Koalas between habitat patches is also to be provided.

3.4.3 Brisbane City Council Natural Assets Local Law

Vegetation on the site is subject to the Brisbane City Council *Natural Assets Local Law 2003* (NALL), as it is mapped within the Significant Urban Vegetation overlay. The NALL applies to protected vegetation, and a permit is required for its removal.

Protected vegetation is defined in the NALL to mean—

a) Council vegetation;
b) Significant native vegetation;
c) Significant urban vegetation;
d) Waterway and wetland vegetation;
e) Vegetation the subject of a vegetation protection order.

Council vegetation means vegetation in or upon any land or premises owned, occupied, or controlled by Council.

Significant native vegetation means native vegetation with characteristics predominantly reflecting or promoting the protection of biodiversity values and preserving natural landforms and is also within a mapped significant native vegetation overlay.

Significant urban vegetation means a significant landscape tree and/or trees with characteristics predominantly reflecting or promoting the retention of the landscape character, historical or cultural values of the City.

Significant Landscape Trees are listed in Table 3.1.

Waterway and wetland vegetation means native vegetation with characteristics predominantly reflecting or promoting the protection of biodiversity values and preserving natural landforms and is also mapped within the waterway corridor or wetland overlay.

Table 3.1 Significant Landscape Trees

Species	Common Name	Trunk Dimension
Ficus- *benjamina, obliqua, platypoda, microcarpa var. hillii, bengalensis, macrophylla, religiosa, virens, watkinsiana*	Fig Trees	≧ 100 cm
Mangifera indica	Mango trees	≧ 80 cm
Delonix regia	Poinciana	≧ 80 cm
Jacaranda mimosifolia	Jacaranda	≧ 80 cm
Araucaria- *cunninghamii, bidwillii* *Agathis robusta*	Native pines	≧ 60 cm
Eucalyptus tereticornis *Eucalyptus microcorys* *Eucalyptus racemosa*	Forest Red Gum Tallowwood Scribbly Gum	≧ 60 cm

4 Database Review

To identify the threatened species and ecosystems potentially occurring on or near the subject site, database searches were undertaken. The results of these database searches helped inform the targeted searches for threatened species during the field investigation.

Threatened species and ecological communities are defined as a species or community that is:

- Scheduled as Critically Endangered, Endangered, Vulnerable or Conservation Dependent under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act); and/or
- Scheduled as Critically Endangered, Endangered, Vulnerable, or Near Threatened under the Queensland *Nature Conservation Act 1992* (NCA).

Database searches were restricted to a 2 km radius from the site (Figure 4.1).

While database query results provide the most comprehensive potential species list, search parameters account for a variety of vegetation community types and environmental features that are not present on the subject site. Therefore, it is expected that a search will return results that over-represent the species that could be expected to be present.

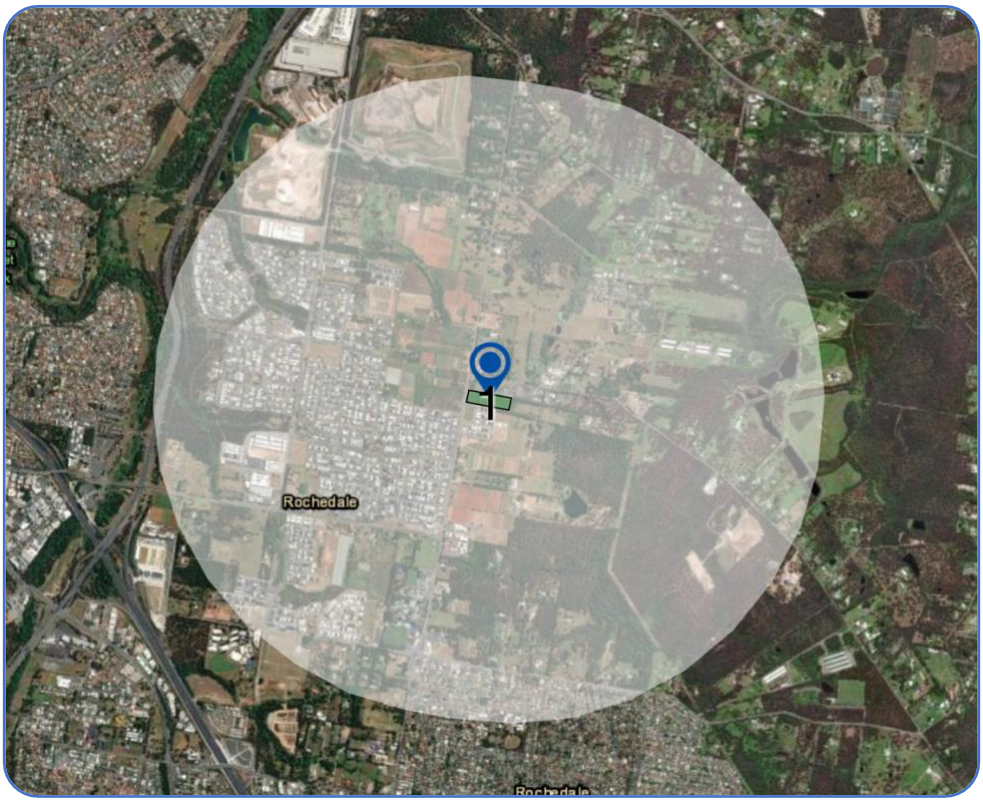


Figure 4.1 Database Search Area

4.1 Protected Matters Database Search

The Commonwealth EPBC Act Protected Matters search tool enables searches for matters of national environmental significance (MNES) in a specified area. The search tool has been designed to generate a list of MNES that may occur in or near a selected area, in this instance, within 2 km of the site (Figure 4.1).

The search results provide a ranking as to the presence of an ecological community, species, or species habitat as follows:

- Known to occur within the area;
- Likely to occur within the area; or
- May occur within the area.

This report focused on species *known to occur* within the search area, as these results are more likely to be reflective of verified data.

Table 4.1 lists the threatened species or species' habitats known to occur within 2 km of the site.

Table 4.1 Protected Matters Search Results

Scientific Name	Common Name	Status
Pteropus poliocephalus	Grey-headed Flying-fox	V

Status: Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*: V = Vulnerable

4.2 WildNet Database Search

A search of the Queensland Government WildNet database was undertaken to identify flora and fauna recorded within a 2 km radius of the site.

Table 4.2 lists the threatened species recorded within 2 km of the site.

Table 4.2 WildNet Database Search Results

Scientific Name	Common Name	Status
Adelotus brevis	Tusked Frog	V
Hirundapus caudacutus	White-throated Needletail	V, V#
Podargus ocellatus plumiferus	Plumed Frogmouth	V
Phascolarctos cinereus	Koala	E, E#
Pteropus poliocephalus	Grey-headed Flying-fox	LC, V#

Status: Queensland *Nature Conservation Act 1992*: E = Endangered, V = Vulnerable, LC = Least Concern.

Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*: E# = Endangered, V# = Vulnerable.

5 Vegetation Survey

A flora survey to determine the characteristics of the site's vegetation communities was undertaken on 27 October 2026.

5.1 Methodology

The focus area was traversed to quantify the broad vegetation communities and dominant species in each. Trees, both native and exotic, which had a trunk diameter of more than 10 cm (measured at 1.3 m above the ground) were surveyed using a hand-held GPS.

5.2 Vegetation Communities

One broad vegetation community is present:

- Vegetation Community 1 – Disturbed Area.

The entire site is largely cleared of woody vegetation, and infrastructure associated with its former use as a commercial nursery is present in a derelict state. There are no naturally occurring ('in-the-wild') vegetation communities or native woody/non-herbaceous species.

Landscaped specimens are present along the northern site boundary and around the dwelling house. Native landscape specimens include *Callitris columellaris* (White Cypress Pine), planted along the northern boundary, and one *Syzygium luehmannii* (Riberry) in the north-eastern corner of the site. All other woody vegetation present on the site was exotic.

While native, *Syzygium luehmannii* and *Callitris columellaris* are not considered to be endemic to the region.

Callitris columellaris is more commonly associated with beach ridges and is not endemic to the pre-clearing regional ecosystem mapped over the site (RE 12.5.3). RE 12.5.3 is described as *Eucalyptus racemosa* subsp. *racemosa* woodland with *Corymbia intermedia, E. siderophloia* +/- *E. tindaliae, E. resinifera, E. pilularis, E. microcorys, Angophora leiocarpa*.

Syzygium luehmannii is commonly associated with rainforests.

The invasive weed *Celtis sinensis* (Chinese Celtis) is the dominant woody vegetation across the site, with *Solanum mauritianum* (Wild Tobacco) being sub-dominant.

Macroptilium atropurpureum (Siratro) is the dominant ground cover. Other species recorded on the site include *Bidens* pilosa (Cobbler's Pegs), *Solanum chrysotrichum* (Giant Devils Fig), *Bambusa* spp. (Bamboo), *Megathyrsus maximus var. maximus* (Guinea Grass), *Paspalum* spp. (Paspalum). The native *Parsonsia straminea* (Monkey Rope Vine) was also recorded.

Figures 5.1 and 5.2 illustrate the vegetation cover and condition across the site.

5.3 Tree Survey

A tree survey was undertaken across the site and is presented as an appendix to this report.

Please note, the tree survey did not collect data for most of the trees that could be removed under an exemption (e.g. pest species, and trees with a trunk diameter of less than 20 cm that were also within 3 m of the boundary).



Figure 5.1 Site Vegetation - Central



Figure 5.2 Site Vegetation - North

6 Fauna Survey

The fauna survey focused on identifying threatened species and their habitats. The survey methodology included targeted searches for conservation-significant species identified through database searches and Essential Habitat mapping.

6.1 Prevailing Weather Conditions

Table 6.1 summarises the prevailing weather conditions during the survey, obtained from the Bureau of Meteorology Redland weather station (located approximately 11 km from the site).

Table 6.1 Prevailing Weather Conditions

Observation	27 October 2026
Minimum temperature	19.5°C
Maximum temperature	27.0°C
Temperature 9 am	25.4°C
Rain until 9 am	1.4 mm
Rainfall previous 7 days	129.2 mm
Wind (9 am)	SSE 7 km/hr
Cloud cover (9 am)	7/8
Sunrise	0500
First Light	0436
Sunset	1802
Last Light	1826

6.2 Survey Methods

The sections below provide an overview of the specific and best-practice techniques employed to search for some of the threatened species recorded in databases. Where a specific methodology is not described, general survey techniques (aural and visual surveys) are considered sufficient.

It was not intended to record all fauna species present on the site.

6.2.1 Tusked Frog

Due to their generally cryptic behaviour and known response to call playback (Katsikaros and Shine, 1997), call-playback surveys for Tusked Frog may increase the probability of detection. Tusk Frogs are known to call during both the day and night. Recommended survey timing is from September to February, during warm, humid, windless conditions when surface water is present (Rowland, 2013).

Call-playback surveys involve listening for a response to the broadcast of a pre-recorded Tusked Frog call.

Where standing water is present, searches for the characteristic nests on the margins of the waterbody can be undertaken. Tusked Frogs produce a foamy egg mass, which the male subsequently guards while the tadpoles are developing.

6.2.2 Plumed Frogmouth

Plumed Frogmouth (*Podargus ocellatus plumiferus*) is restricted to rainforest and wet sclerophyll forest, especially where these forest communities occur along drainage lines. The recommended best time to target this species by call playback is November to March (Smith and Hamley, 2009). Searches were initially undertaken to locate suitable habitat on the site.

6.2.3 Koala

There is no single technique or widely accepted method to survey Koalas (Wilmott et al., 2019).

Visual canopy searches were undertaken during daylight hours. This method involved two observers searching the canopy from multiple directions.

Indirect survey methods were also employed; specifically, searches for signs of Koalas. Faecal pellets (scats) of Koalas and their distinctive scratch marks on smooth-barked trees are readily identifiable and allow for the evaluation of past as well as present habitat occupancy. Both scats and scratch marks persist for a reasonable period after the animal departs from the area (Woosnam-Merchez et al., 2012; Jiang et al., 2019).

While the detection of Koala faecal pellets indicates the presence of Koalas, an inability to locate scats does not demonstrate that Koalas are absent. Jiang et al. (2019) demonstrated that human observers can miss up to 46% of trees with scats. In addition, scat detection surveys cannot be used to determine whether Koalas are resident or transient, nor can they necessarily be correlated to activity levels (Youngentob et al., 2021).

A radius of 1 m from the base of a selection of preferred Koala food trees (e.g. *Eucalyptus microcorys*, *E. tereticornis*, and *E. propinqua*) was searched until Koala scat was found, or the observer was satisfied that a scat would likely have been located if present.

Where direct observations are not recorded, the identification of traces allows the presence of this species to be confirmed despite the limitations, as described above, and involves minimal habitat disturbance.

6.2.4 Grey-headed Flying-fox

Flying-foxes congregate in communal camps during the day, dispersing at night to forage. Surveys for Grey-headed Flying-foxes involved diurnal inspection of vegetation, particularly that in riparian areas, for evidence of current or past camp occupation.

6.3 Survey Limitations

This survey was not intended to produce a full inventory of fauna species utilising the site; rather, it focused on locating threatened species and/or their habitats.

The absence of a species in a single survey does not confirm its absence from the site. Reliable conclusions about a target species' absence require repeated surveys conducted across different seasons and often different years.

Despite these limitations, the survey effort is considered commensurate with the requirements of an ecological assessment under the applicable planning scheme policy, having regard to the nature and extent of the proposed development. The assessment has appropriately prioritised targeted searches for threatened species and an evaluation of the habitats and

ecological values relevant to their potential occurrence, rather than seeking to compile an inventory of commonly occurring fauna. This targeted approach provides information directly relevant to assessing the likelihood of significant species occurring within the impact area and determining the potential ecological consequences of the proposed development.

6.4 Fauna Species Observed

While targeted surveys of threatened species were the primary focus, incidental observations were also made. Table 6.2 provides a list of the fauna species observed.

Table 6.2 Fauna Species Observed

Scientific Name	Common Name
Birds	
Alectura lathami	Brush Turkey
Cacatua sanguinea	Little Corella
Corvus orru	Torresian Crow
Cracticus tibicen	Australian Magpie
Dacelo novaeguineae	Laughing Kookaburra
Elanus axillaris	Black-shouldered Kite
Manorina melanocephala	Noisy Miner
Meliphaga lewinii	Lewin's Honeyeater
Pardalotus striatus	Striated Pardalote
Philemon corniculatus	Noisy Friarbird
Synoicous ypsilophorus	Brown Quail
Todiramphus macleayii	Forest Kingfisher
Trichoglossus haematodus moluccanus	Rainbow Lorikeet
Vanellus miles	Masked Lapwing
Mammals	
Notamacropus rufogriseus	Red-necked Wallaby
Reptiles	
Tropidonophis mairii	Freshwater Snake

6.5 Habitat Assessment

A habitat assessment has been undertaken as a surrogate for intensive fauna surveys, and considers the availability, condition, and connectivity of habitat features relevant to threatened and other conservation-significant species. The assessment identifies terrestrial ecosystem features that provide important food, nesting, and shelter resources for fauna, which inform the Likelihood of Occurrence assessment (refer to Section 6.6). These habitat attributes, including habitat trees, waterways, and other relevant features, provide a reasonable basis for evaluating fauna habitat values where intensive survey effort is not warranted or practical.

Table 6.3 presents the results of the habitat assessment.

Table 6.3 Habitat Assessment Summary

Habitat Feature	Present	Comments
Hollow-bearing trees, including dead stags	No	
Trees with DBH >50 cm	Yes	
Logs	Yes	Fallen trees are present
Wetlands, streams, rivers, dams, and other water bodies – permanent or intermittent	No	No standing water was present, despite several days of rain prior to the site investigation
Nests and roosts	Yes	A Brush Turkey was actively adding to a nest mound
Sap feed trees for the Yellow-bellied Glider and Squirrel Glider	No	
Distinctive scats or signs (e.g. those of Spotted-tailed Quoll or Koala)	No	
Preferred Koala food trees present: Tallowwood (*E. microcorys*), Forest Red Gum (*E. tereticornis*), Grey Gum (*E. propinqua/E. biturbinata*), Red Stringybark (*E. resinifera*)	No	
Latrine and den sites of the Spotted-tailed Quoll	No	
She-oak species	No	
Presence of chewed she-oak cones (and age)	No	
Flying-fox camps	No	
Microchiroptera bat subterranean roosts (caves, culverts, tunnels, and disused mine shafts)	No	
Areas that can act as corridors for plant or animal species' movement	No	The site is surrounded by agricultural or residential land that is largely devoid of native woody vegetation.
Degree of connectivity	-	Isolated

6.6 Likelihood of Threatened Fauna Occurrence

The likelihood of occurrence assessment adopts a three-tiered approach. The first step is based on database interrogation to identify species recorded in the search area – in this instance, within 2 km of the subject site. The second step is based on a field survey to determine the presence of suitable habitat on and proximal to the subject site. Finally, through professional knowledge of the ecological requirements of these species, an assessment is then made as to whether these species are likely to occur.

Although assessments of habitat, combined with knowledge of a species' ecology, do provide a measure to predict the presence of a species, there are no methodologies that can predict, with absolute certainty, the absence of a species from potential habitat. It cannot be confidently claimed that a target species is absent from a site without repeated seasonal surveys. Consequently, threatened species are assumed to be present if their habitat requirements are met.

Four terms for the likelihood of occurrence are used:

- Known: the species has been observed on the site (either an individual or a sign).
- Potential: suitable habitat for a species occurs on the site.
- Unlikely: preferred habitat is not present on or is degraded and limited in size, and as such, a species is considered to have a low to very low probability of occurring on the site.
- No: habitat on site and in the vicinity is unsuitable for a particular species.

Table 6.4 presents the results of this assessment.

6.7 Threatened Fauna Survey Results

No direct or indirect evidence of any threatened species was recorded during the site investigation. The vegetation community present on the site does not provide habitat for any threatened species identified in the database search.

Table 6.4 Threatened Fauna – Assessment of Likelihood of Occurrence

Scientific Name	Common Name	Status*	Ecology	Likelihood of Occurrence
Birds				
Hirundapus caudacutus	White-throated Needletail	V, V#	White-throated Needletail breeds in Asia, from central and south-eastern Siberia and Mongolia, east to the Maritime Territories of Russia, Sakhalin and the Kuril Islands and south to northern Japan and north-eastern China (DCCEEW, 2025). Most White-throated Needletails spend the non-breeding season in Australasia. It is widespread in eastern and south-eastern Australia, from the islands in Torres Strait and the tip of Cape York south to Tasmania (DCCEEW, 2025). In Australia, the White-throated Needletail is almost exclusively aerial. The species forages aerially, at heights up to 'cloud level', above a wide variety of habitats ranging from heavily treed forests to open habitats, such as farmland, heathland or mudflats (DCCEEW, 2025).	**NO** As this species is almost exclusively aerial, the site itself would not be inhabited by White-throated Needletail. However, the birds may potentially fly above the site.
Podargus ocellatus plumiferus	Plumed Frogmouth	V	Plumed Frogmouths are rare, cryptic, shy, nocturnal birds restricted primarily to rainforest and wet sclerophyll forest at altitudes from 50–800 m in un-logged pristine forests. A stronghold for Plumed Frogmouth occurs in the Conondale Ranges (Smith et al. 1998). Individuals radio-tracked in the Conondale Ranges occupied home ranges from 5 to 18 ha. Estimates of the combined home ranges of pairs ranged from 12 to 19 ha. Home range overlap between pairs was minimal (Smith et al. 1998).	**NO** Suitable habitat for this species is not present on the subject site.
Mammals				
Phascolarctos cinereus	Koala	E, E#	The Koala inhabits dry open sclerophyll forests and woodlands occurring on fertile soils (Van Dyck, 1995; Menkhorst and Knight, 2001; Environmental Protection Agency (EPA), 2006). Communities containing denser vegetation and larger trees are generally preferred; however, Koala can also inhabit less optimal habitat such as young forests, highly fragmented vegetation communities, and small remnants (EPA, 2006). They mainly feed on *Eucalyptus* species, along with some	**NO** Suitable habitat is not present on the site or on the immediately adjacent properties.

Scientific Name	Common Name	Status*	Ecology	Likelihood of Occurrence
			Corymbia, *Angophora*, *Lophostemon*, *Melaleuca*, and *Leptospermum* species (EPA, 2006).	
Pteropus poliocephalus	Grey-headed Flying-fox	LC, V#	The Grey-headed Flying-fox occurs in the coastal belt from Rockhampton to Melbourne. It is a canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, *Melaleuca* swamps and *Banksia* woodlands (Eby, 1998). None of the vegetation communities used by the Grey-headed Flying-fox produces continuous foraging resources throughout the year, so the species selectively forage where food is available. As a result, patterns of occurrence and relative abundance within its distribution vary widely between seasons and between years. At a local scale, the species is generally present intermittently and irregularly (Eby & Lunney, 2002). The Grey-headed Flying-fox roosts in aggregations of various sizes on exposed branches. They most frequently travel around 15 km from a roost site to feed (Tidemann, 1998), although can travel up to 50 km as food resources change (Eby, 1991).	**UNLIKELY** Foraging habitat is not present on the site. No flying-fox camps are present on the site.
Amphibians				
Adelotus brevis	Tusked Frog	V	The Tusked Frog is a ground-dwelling frog that has a distribution that extends from the coast and adjacent ranges from central Queensland to southern NSW (Hines, 2012). The species inhabits rainforests and wet forests. Tusked Frogs have also been recorded from dams and garden ponds in urban and peri-urban areas (Hines, 2012). Tusked Frogs can be found close to suitable breeding habitats such as ponds and slow-moving sections of streams (Meyer et al., 2001; Hines, 2012). They call while hidden amongst vegetation and leaf litter (Hines, 2012).	**NO** Standing water is not present on the site.

Status: Queensland *Nature Conservation Act 1992*: E = Endangered, V = Vulnerable, LC = Least Concern.

Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*: E#= Endangered, V#= Vulnerable.

7 Proposed Development

The development proposes a multi-lot residential development, constructed over stages. An internal road with provision for future connections to surrounding developments and a stormwater drainage reserve are included in the plan of development (Figure 7.1).



Figure 7.1 Plan of Development

8 Impact Assessment

8.1 Koala

Matters of environmental significance on the site are limited to potential Koala habitat.

The definition of Koala habitat per the Nature Conservation (Koala) Conservation Plan 2017 has been adopted for this report, as follows:

a) an area of vegetation in which Koalas live and that includes a Koala habitat tree; or
b) an area of vegetation that consists primarily of Koala habitat trees and which is reasonably suitable for sustaining Koalas; or
c) a partially or completely cleared area used by Koalas to cross from an area mentioned in paragraph (a) or (b) to another area mentioned in paragraph (a) or (b)

A Koala Habitat Tree means:

a) a tree of the *Blakella*, *Corymbia*, *Eucalyptus*, *Lophostemon* or *Melaleuca* genera that is edible by Koalas; or
b) a tree of a type typically used by Koalas for shelter, including, for example, a tree of the *Angophora* genus.

A Koala Habitat Impact Assessment has been prepared as an addendum to this report.

8.2 Vegetation

Vegetation on the site is non-endemic. While the entire site is mapped within the Significant Urban Vegetation overlay, the trees present on the site are not Significant Landscape Trees, nor are they associated with traditional residential streetscapes or historic properties, and as such, do not contribute to the distinctive character and sense of place of the surrounding area. Additionally, there are no records of a vegetation protection order over any of this vegetation.

It is understood, per Part 7, Section 45 of the NALL, pest vegetation, where it does not meet the criteria of a Significant Landscape Tree listed in Schedule 2, can be removed without a permit. These species are identified on the Tree Survey Plan included as an appendix to this report.

A permit is required under the NALL for the removal of the balance of the vegetation on the site, despite it either being planted as part of the site landscaping or being an exotic species.

9 Mitigation Measures

The following sections detail the mitigation measures that are to be adopted during clearing and construction to reduce the risk of harm to wildlife.

9.1 Fauna Management

Wherever land clearing involves the removal of woody vegetation, operations implemented are to be consistent with the management measures outlined below:

- Before the commencement of clearing each day, fauna spotter catchers are to examine the area to be cleared for fauna;
- Cleared vegetation or mulch stockpiles are not to be stockpiled in locations where they may impede fauna movement;
- Companion animals are not to be taken onto the site during construction;
- All site personnel shall attend site induction training before entering the work site. As part of this training, all personnel shall be briefed about their obligations to protect Koala and other native fauna;
- Approved clearing boundaries are to be delineated (e.g., with high visibility poly-web fencing) before the commencement of vegetation removal; and
- During the site induction, all site personnel are to be made aware of the clearing areas and the restrictions imposed in the areas of retained vegetation.

Specific management measures for Koala are included in the Koala Habitat Impact Assessment, included as an addendum to this report.

9.1.1 Macropod Management

Macropods are marsupials belonging to the kangaroo family, which includes kangaroos, wallabies, pademelons, and tree kangaroos.

The goals of macropod management at this site are to:

- Allow macropods to self-disperse from the operational works area; and
- Minimise risks to macropods by using appropriate responsive management actions.

If macropods are found within the clearing or construction zone, the following guidelines apply:

- Allow the macropod to leave of its own volition. Herding of macropods can cause stress and confusion to the animal and can lead to erratic behaviour with the potential to cause injury to itself and/or site personnel.
- Should a macropod become trapped within a construction area that is surrounded by temporary fencing, a section of the fence is to be removed, and the macropod is allowed to self-disperse.

Capturing a trapped macropod to relocate it to suitable habitat is not supported.

9.1.2 Artificial Light at Night

Wildlife is often exposed to direct lighting (such as streetlights) and indirect lighting through sky glow at night (Russart and Nelson, 2018). Sky glow is the brightness of the night sky caused by the reflected light scattered from particles in the atmosphere and comprises both

natural and artificial sources. As sky glow increases, so does the potential for adverse impact on wildlife (DEE, 2019).

It is estimated that at least 30% of all vertebrates, including most Australian native mammals, are nocturnal and have evolved highly developed senses to be active during low-light conditions (Schroer and Holker, 2017). Artificial light at night (ALAN) interferes with natural light information, disrupting circadian rhythms and is known to adversely affect many species (Russart and Nelson, 2018). It can change behaviour and physiology, increase predation rates, and alter habitat and food availability (DEE, 2019). Light at night can also mask the detection of short days, inappropriately signal long days, and thus desynchronize seasonal reproductive activities (Russart and Nelson, 2018).

Sensitivity to high-energy short-wavelength UV/violet/blue light is common in nocturnal wildlife (DEE, 2019). While light of any kind can suppress melatonin and the physiological processes it regulates, light with short wavelengths is a strong suppressor of melatonin. Melatonin is required to regulate circadian rhythms. Shifting the spectral output to longer wavelengths could mitigate these negative physiological impacts (Dimovski and Robert, 2018).

It is recommended that all outdoor artificial lighting used in and around the development incorporate best-practice lighting design. This includes:

- Use light for a specific and necessary purpose;
- Manage light timing;
- Light only the intended area, keep light directed and shielded to avoid light spill into adjacent vegetation;
- Use the lowest intensity light appropriate; and
- Use lights with reduced or filtered blue, violet, and ultraviolet wavelengths.

9.1.3 Dust Suppression

To minimise impacts from dust during construction, all exposed areas are to be watered or covered with mulch. Shake-down pads are to be provided at the construction site exit. In appropriate areas, plant installation/rehabilitation, with mulch application, is to commence as soon as possible after the completion of construction activities.

9.1.4 Hollow Salvage and Replacement

In recognition of the importance of tree hollows for native fauna, salvage of hollow limbs will be undertaken during clearing operations. These hollows are to be reinstated within the areas of retained vegetation.

9.1.5 Temporary Fauna Exclusion Fencing

The interface of the development site and adjoining properties will be fenced temporarily with fauna exclusion fencing during construction.

9.1.6 Direction of Clearing

The clearing is to be done in a manner that ensures wildlife in the clearing area have enough time to move off the site without human intervention.

The direction of clearing should be away from hostile environments (such as roads or cleared areas), and towards any retained vegetation or habitat links, ensuring that:

- Wildlife is not pressured to cross over roads or move through developed or disturbed areas, or areas that require movement of greater than 100 m over cleared ground to reach suitable habitat;
- Wildlife is not left occupying an 'island' of habitat between hostile environments; and
- Wildlife can safely leave the site and relocate to adjacent habitat.

9.2 Management of Retained Vegetation

Tree protection fencing is to be erected before any change to ground-level works is undertaken. The fencing is to be installed at the limits of the drip zone of all retained vegetation adjacent to the building envelope and is to delineate the extent of earthworks to ensure adjacent vegetation remains undamaged. The fencing is to be installed following Australian Standard *AS4970-2025: Protection of trees on development sites*. Tree protection fencing can also serve as temporary fauna exclusion fencing where appropriate.

Activities excluded within the tree protection zone include, but are not limited to:

- Construction of unapproved pathways/trails;
- Earthworks;
- Storage of machinery and/or vehicles;
- Dumping of site waste;
- Liquid disposal;
- Stockpiling of mulch/chipped material/soil;
- Refuelling of machinery;
- Washing down and cleaning of equipment;
- Lighting of fires;
- Unauthorised application of pesticides, herbicides, or chemicals;
- Preparation of chemicals, including cement products; and
- Physical damage to the trees.

Signage is to be displayed on the tree protection fence identifying the area as a Tree Protection Zone and indicating that no entry is permitted.

All work in areas adjacent to retained vegetation must be carried out without causing damage to the vegetation.

Where a protected tree's root zone and/or trunk could be damaged by the proposed earthworks, a qualified arborist should be contracted to:

- Provide advice regarding the protection of the tree/s;
- Treat any roots that may be exposed during construction; and
- Treat any damage that may occur during construction.

Pruning of protected trees is to occur only where it is determined necessary by a qualified arborist, and any such work on the trunk, foliage, or root system of the tree must adhere to the Australian Standard *AS 4373-2007: Pruning of amenity trees*.

Any invasive weeds removed from the site are to be disposed of at an approved green waste facility.

10 Summary

The proposed development has been evaluated against relevant environmental planning legislation. Table 10.1 provides a summary of this information.

Table 10.1 Summary of Legislative Assessment

Legislation	Applicability to Development
Environmental Protection and Biodiversity Conservation Act 1999	No significant residual impact is likely to result on MNES. No further assessment is required.
Planning Regulation 2017	No impacts on the mapped Core Koala habitat are proposed and the development is far enough away from mapped habitat areas that indirect impacts are unlikely. No further assessment is required.
Vegetation Management Act 1999	No further assessment is required by the State government for impacts on vegetation regulated under the *Vegetation Management Act*.
Biodiversity Areas Overlay Code	A code response has been included as Appendix A.

10.1 Compliance with the Biodiversity Areas Overlay Code

The development is able, or will be able via approval conditions, to comply with either the Performance Outcomes or Acceptable Outcomes of the Biodiversity Areas Overlay Code.

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Appendix A

Tree Survey Plan

TREE SURVEY PLAN

470 ROCHEDALE ROAD, ROCHEDALE

Revision: A
November 2026

BIOME Consulting Pty Ltd
Unit 30201, Southport Central Tower 3
9 Lawson Street, Southport.
PO Box 3469, Southport. Q 4215

O: 07 5532 7779
admin@BIOMEconsulting.com.au
www.BIOMEconsulting.com.au

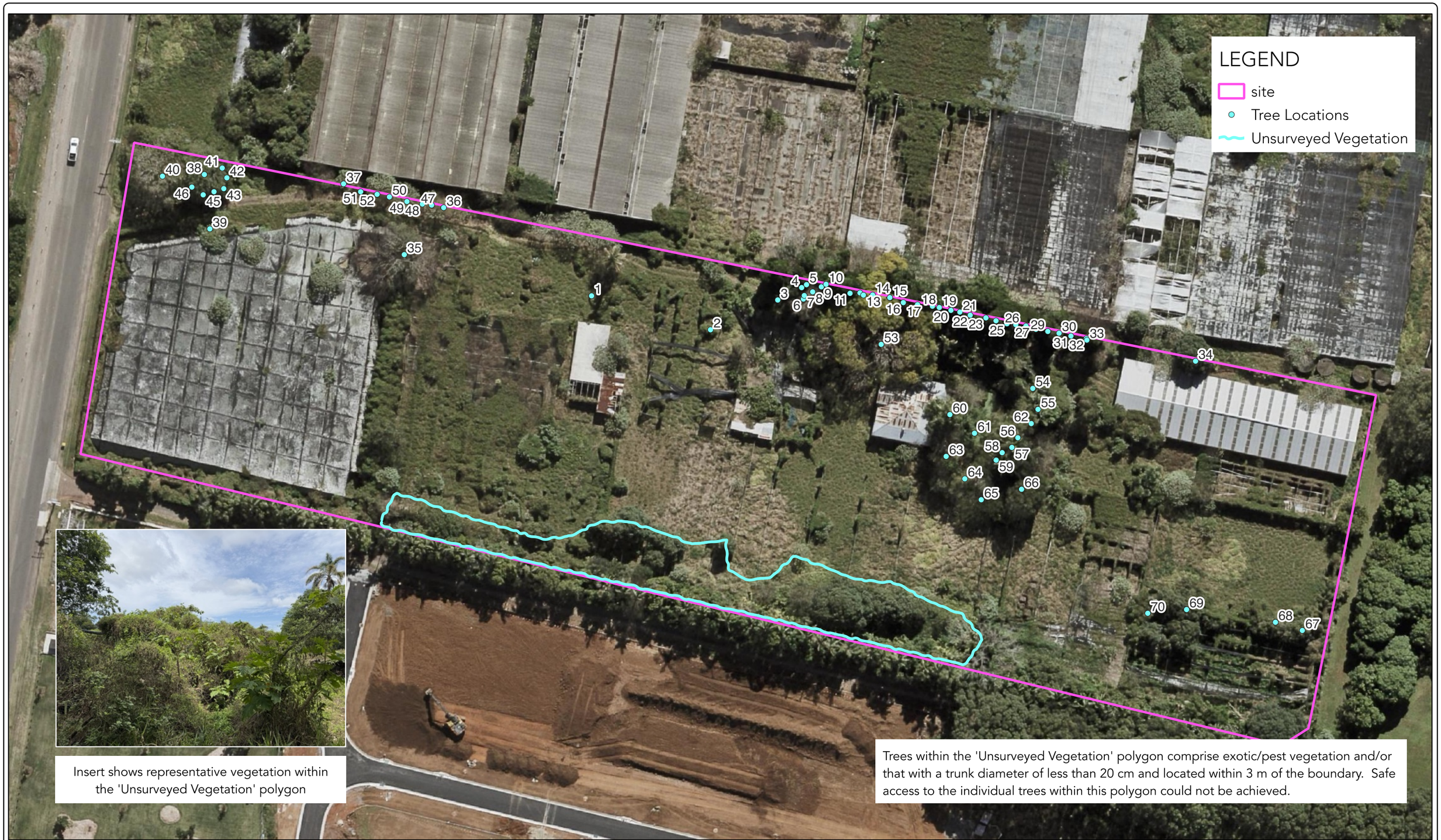
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WATER AND ENVIRONMENTAL CONSULTING

Project: BC-26073



SCHEDULE OF DRAWINGS	
Drawing No.	Drawing Title
TSP-01	Tree location plan
TSP-02	Tree clearing plan
TSP-03	Tree information table



Insert shows representative vegetation within the 'Unsurveyed Vegetation' polygon

Trees within the 'Unsurveyed Vegetation' polygon comprise exotic/pest vegetation and/or that with a trunk diameter of less than 20 cm and located within 3 m of the boundary. Safe access to the individual trees within this polygon could not be achieved.

DATE : 13.11.2026

PROJECT No. : BC-26073

DRAWING No. : TSP-1.0

REVISION No. : A

PROJECT : TREE SURVEY PLAN

DRAWING TITLE : TREE LOCATION PLAN

ADDRESS : 470 ROCHEDALE ROAD, ROCHEDALE

DRAFTED BY :	*DESIGNED BY :*	*CHECKED BY :*	*PAPER SIZE :*	*SCALE :*
NL	NL	AB	A3	1:800

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ORIGINAL SCALE BEFORE REDUCTION

0 10 20 30 40 m

1:800 (AT A3) (meters)

N



DATE :
13.11.2026
PROJECT No. :
BC-26073
DRAWING No. :
TSP-1.1
REVISION No. :
A

PROJECT : TREE SURVEY PLAN
DRAWING TITLE : TREE STATUS
ADDRESS : 470 ROCHEDALE ROAD, ROCHEDALE

DRAFTED BY :	*DESIGNED BY :*	*CHECKED BY :*	*PAPER SIZE :*	*SCALE :*
NL	NL	AB	A3	1:800

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0 10 20 30 40 m
1:800 (AT A3) (meters)
N



DATE :
13.11.2026

PROJECT No. :
BC-26073

DRAWING No. :
TSP-2.0

REVISION No. :
A

PROJECT :
TREE SURVEY PLAN

DRAWING TITLE :
TREE CLEARING PLAN

ADDRESS :
470 ROCHEDALE ROAD, ROCHEDALE

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ORIGINAL SCALE BEFORE REDUCTION
0 10 20 30 40 m
1:800 (AT A3) (meters)
N

NO.	SCIENTIFIC NAME	COMMON NAME	DSH_m	NRZ_m	SRZ_m	WEED STATUS	ACTION
1	Celtis sinensis	Chinese Elm	0.4	4.8	2.25	RIP	Remove
2	Celtis sinensis	Chinese Elm	0.3	3.6	2.00	RIP	Remove
3	Callitris columellaris	White Cypress Pine	0.6	7.2	2.67		Remove
4	Celtis sinensis	Chinese Elm	0.35	4.2	2.13	RIP	Remove
5	Callitris columellaris	White Cypress Pine	0.25	3	1.85		Remove
6	Callitris columellaris	White Cypress Pine	0.35	4.2	2.13		Remove
7	Callitris columellaris	White Cypress Pine	0.55	6.6	2.57		Remove
8	Callitris columellaris	White Cypress Pine	0.38	4.56	2.20		Remove
9	Celtis sinensis	Chinese Elm	0.75	9	2.93	RIP	Remove
10	Callitris columellaris	White Cypress Pine	0.4	4.8	2.25		Remove
11	Callitris columellaris	White Cypress Pine	0.5	6	2.47		Remove
12	Callitris columellaris	White Cypress Pine	0.32	3.84	2.05		Remove
13	Callitris columellaris	White Cypress Pine	0.43	5.16	2.32		Remove
14	Callitris columellaris	White Cypress Pine	0.44	5.28	2.34		Remove
15	Celtis sinensis	Chinese Elm	0.49	5.88	2.45	RIP	Remove
16	Callitris columellaris	White Cypress Pine	0.45	5.4	2.37		Remove
17	Callitris columellaris	White Cypress Pine	0.3	3.6	2.00		Remove
18	Callitris columellaris	White Cypress Pine	0.43	5.16	2.32		Remove
19	Callitris columellaris	White Cypress Pine	0.3	3.6	2.00		Remove
20	Callitris columellaris	White Cypress Pine	0.52	6.24	2.51		Remove
21	Callitris columellaris	White Cypress Pine	0.34	4.08	2.10		Remove
22	Callitris columellaris	White Cypress Pine	0.4	4.8	2.25		Remove
23	Callitris columellaris	White Cypress Pine	0.45	5.4	2.37		Remove
24	Callitris columellaris	White Cypress Pine	0.42	5.04	2.30		Remove
25	Callitris columellaris	White Cypress Pine	0.3	3.6	2.00		Remove
26	Callitris columellaris	White Cypress Pine	0.3	3.6	2.00		Remove
27	Callitris columellaris	White Cypress Pine	0.4	4.8	2.25		Remove
28	Callitris columellaris	White Cypress Pine	0.5	6	2.47		Remove
29	Callitris columellaris	White Cypress Pine	0.6	7.2	2.67		Remove
30	Callitris columellaris	White Cypress Pine	0.3	3.6	2.00		Remove
31	Callitris columellaris	White Cypress Pine	0.4	4.8	2.25		Remove
32	Callitris columellaris	White Cypress Pine	0.45	5.4	2.37		Remove
33	Celtis sinensis	Chinese Elm	0.65	7.8	2.76	RIP	Remove
34	Corymbia torelliana	Cadagi	0.2	2.4	1.68	Pest species - NALL	Exempt Clearing
35	Celtis sinensis	Chinese Elm	0.9	10.8	3.17	RIP	Remove
36	Celtis sinensis	Chinese Elm	0.14	2	1.50	RIP	Exempt Clearing
37	Celtis sinensis	Chinese Elm	0.2	2.4	1.68	RIP	Exempt Clearing
38	Syzygium luehmannii	Riberry	0.6	7.2	2.67		Remove
39	Solanum mauritianum	Wild Tobacco	0.2	2.4	1.68	Pest species - NALL; OIP	Exempt Clearing
40	Spathodea campanulata	African Tulip Tree	0.85	10.2	3.09	Exotic	Remove
41	Celtis sinensis	Chinese Elm	0.13	2	1.50	RIP	Remove
42	Celtis sinensis	Chinese Elm	0.11	2	1.50	RIP	Remove
43	Celtis sinensis	Chinese Elm	0.14	2	1.50	RIP	Remove
44	Celtis sinensis	Chinese Elm	0.13	2	1.50	RIP	Remove
45	Celtis sinensis	Chinese Elm	0.11	2	1.50	RIP	Remove
46	Celtis sinensis	Chinese Elm	0.13	2	1.50	RIP	Exempt Clearing
47	Celtis sinensis	Chinese Elm	0.14	2	1.50	RIP	Exempt Clearing
48	Celtis sinensis	Chinese Elm	0.15	2	1.49	RIP	Exempt Clearing
49	Celtis sinensis	Chinese Elm	0.14	2	1.50	RIP	Exempt Clearing
50	Celtis sinensis	Chinese Elm	0.13	2	1.50	RIP	Exempt Clearing
51	Celtis sinensis	Chinese Elm	0.12	2	1.50	RIP	Exempt Clearing
52	Celtis sinensis	Chinese Elm	0.16	2	1.53	RIP	Remove
53	Jacaranda mimosifolia	Jacarnada	0.7	8.4	2.85	Pest species - NALL	Exempt Clearing
54	Roystonea regia	Royal palm	0.3	3.6	2.00	Exotic	Remove
55	Roystonea regia	Royal palm	0.3	3.6	2.00	Exotic	Remove
56	Roystonea regia	Royal palm	0.33	3.96	2.08	Exotic	Remove
57	Roystonea regia	Royal palm	0.4	4.8	2.25	Exotic	Remove
58	Roystonea regia	Royal palm	0.3	3.6	2.00	Exotic	Remove
59	Roystonea regia	Royal palm	0.3	3.6	2.00	Exotic	Remove
60	Roystonea regia	Royal palm	0.45	5.4	2.37	Exotic	Remove
61	Delonix regia	Poicinana	0.44	5.28	2.34	Exotic	Remove
62	Mangifera indica	Mango	0.2	2.4	1.68	Exotic	Remove
63	Celtis sinensis	Chinese Elm	0.3	3.6	2.00	RIP	Remove
64	Celtis sinensis	Chinese Elm	0.3	3.6	2.00	RIP	Remove
65	Celtis sinensis	Chinese Elm	0.3	3.6	2.00	RIP	Remove
66	Celtis sinensis	Chinese Elm	0.3	3.6	2.00	RIP	Remove
67	Celtis sinensis	Chinese Elm	0.2	2.4	1.68	RIP	Remove
68	Celtis sinensis	Chinese Elm	0.22	2.64	1.75	RIP	Remove
69	Celtis sinensis	Chinese Elm	0.18	2.16	1.61	RIP	Remove
70	Celtis sinensis	Chinese Elm	0.18	2.16	1.61	RIP	Remove

Per the Biosecurity Act 2014 (Qld):
RIP = Restricted Invasive Plant
OIP = Other Invasive Plant

DATE : 13.11.2026
PROJECT No. : BC-26073
DRAWING No. : TSP-3.0
REVISION No. : A

PROJECT : TREE SURVEY PLAN
DRAWING TITLE : TREE DETAILS
ADDRESS : 470 ROCHEDALE ROAD, ROCHEDALE

DRAFTED BY :	*DESIGNED BY :*	*CHECKED BY :*	*PAPER SIZE :*	*SCALE :*
NL	NL	AB	A3	

APPROVED FOR AND ON BEHALF OF BIOME CONSULTING PTY LTD ACN 166 087 476

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BIOME
WATER AND ENVIRONMENTAL CONSULTING
BIOME Consulting Pty Ltd
PO Box 3469, Southport Q 4215
admin@BIOMEconsulting.com.au
ABN 86 166 087 476

Appendix B

Biodiversity Areas Code Response

8.2.4 Biodiversity areas overlay code

8.2.4.1 Application

1. This code applies to assessing development in the Biodiversity areas overlay, if:
    a. assessable development where this code is an applicable code identified in the assessment benchmarks column of a table of assessment for an overlay (section 5.10); or
    b. impact assessable development.
2. Land in the Biodiversity areas overlay is identified on the Biodiversity areas overlay map and is included in the following sub-categories:
    a. High ecological significance sub-category;
    b. High ecological significance strategic sub-category;
    c. General ecological significance sub-category;
    d. General ecological significance strategic sub-category;
    e. Koala habitat area sub-category.
    f. Matters of state environmental significance sub-category.
3. When using this code, reference should be made to section 1.5 and section 5.3.3.
4. A neighbourhood plan code may vary the application of this code. Where that occurs, the neighbourhood plan code prevails to the extent it varies from this code.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:
- ecological assessment, koala habitat or development design, guidance is provided in the Biodiversity areas planning scheme policy;
- wildlife movement solutions, guidance is provided in the Infrastructure design planning scheme policy;
- an environmental offset, guidance is provided in the Offsets planning scheme policy.

Note—Biodiversity areas mapping:
- The Biodiversity areas overlay mapping includes areas with both existing biodiversity values and areas of strategic biodiversity value.
- The Biodiversity areas overlay mapping has been undertaken on a city-wide scale. Ecological assessments may be appropriate in order to assess the broader impact of development on desired biodiversity values and outcomes for the locality, area or the region. Such an assessment may be considered as part of relevant information in revision and refinement of the biodiversity outcomes in the locality.
- In such cases the revision and refinement of biodiversity outcomes may be dealt with as part of the development proposal. Prior to undertaking such an assessment, discussions should be undertaken with Council to identify existing and planned biodiversity values for the site. In undertaking the assessment and proposing alternate outcomes, the existing values and planned biodiversity outcomes for the site, area, locality and region must be considered and provided for. This assessment should also address the practicality, based on the extent of existing developments, of being able to achieve the planned biodiversity values and outcomes for the site.

Note—In accordance with the *Environmental Offsets Act 2014*, environmental offsets as identified in performance outcome PO9 and acceptable outcome AO9 of this code will be applicable only where development will or is likely to have a significant residual impact on matters of local environmental significance or matters of State environmental significance and all reasonable on-site mitigation measures for the development have been, or will be, undertaken.

8.2.4.2 Purpose

1. The purpose of the Biodiversity areas overlay code is to:
    a. Implement the policy direction in the Strategic framework, in particular:
        i. Theme 3: Brisbane's clean and green leading environmental performance and Element 3.1 — Brisbane's environmental values;
        ii. Theme 5: Brisbane's CityShape and Element 5.6 — Brisbane's Greenspace System.
    b. Provide for the assessment of the suitability of development in the Biodiversity areas overlay.
    c. Provide for the protection, avoidance or mitigation of impacts to matters of local environmental significance and matters of state environmental significance.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. Conservation, consolidation, connection and restoration of the network of lands with in-situ values or areas of strategic biodiversity value within Brisbane.
    b. Protection and enhancement of waterways and foreshores with significant biodiversity values.
    c. Protection and enhancement of wetlands with significant biodiversity values and their hydrological value and water-cleaning functions.
    d. Protection, enhancement and restoration of koala habitat and the facilitation of safe koala movement to assist in the long-term retention of a viable koala population within South East Queensland.
    e. Avoidance of impacts to biodiversity values, ecological features and ecological processes through the placement of development within a development footprint plan.
    f. All reasonable on-site measures to avoid and mitigate impacts on biodiversity values from the development have been, or will be, undertaken.
    g. Provision for environmental offsets that achieve an equivalent environmental outcome, where development will or is likely to have a significant residual impact on matters of local environmental significance or matters of State environmental significance.

8.2.4.3 Performance outcomes and acceptable outcomes

Table 8.2.4.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
Section A—If for a dwelling house or associated filling or excavation		
PO1 Development is within a single development footprint sited to: a. minimise the clearing and fragmentation of native vegetation, including any vegetative growth and material of vegetative origin, whether living or dead, including trunks, branches, stems, leaves, fruits and flowers, and ecological	**AO1.1** Development ensures that the dwelling house is contained within a single development footprint plan, that minimises the proportion of the development footprint within the High ecological significance sub-category, the High ecological significance strategic sub-category, the General ecological significance sub-category or the General ecological significance strategic sub-category. Note—Where there is no approved development footprint plan, a	**NOT APPLICABLE** Development is not for a dwelling house

features within the Biodiversity areas overlay; b. maximise the extent of habitat restoration of areas of strategic biodiversity value within the High ecological significance sub-category or the High ecological significance strategic sub-category on the Biodiversity areas overlay. Note—An ecological assessment prepared in accordance with the Biodiversity areas planning scheme policy can assist in demonstrating achievement of this performance outcome. Note—A development footprint may be used to fulfil recommendations of an ecological assessment. A development footprint plan can be shown on a plan of survey or be part of approved development.	development footprint plan is to be prepared to support this acceptable outcome and this plan forms part of the approved development. **AO1.2** Development ensures that the dwelling house is contained within a single development footprint plan, no greater than: a. 1000m^2 where in the Low density residential zone, the Low-medium density residential zone, the Medium density residential zone, High density residential zone or the Character residential zone; or b. 2500m^2 where in the Environmental management zone, the Conservation zone, the Emerging community zone, the Rural zone or the Rural residential zone, as shown in Figure a. **AO1.3** Development ensures that management of vegetation undertaken to reduce risk from bushfire hazard, as demonstrated through a Bushfire Management Plan, occurs within a single bushfire management footprint plan no greater than 1500m^2 which adjoins the development footprint plan. Refer to Figure c.	
PO2 Development ensures that ecological features and ecological processes, koala habitat trees, areas of strategic biodiversity value and wetlands are protected to ensure their long-term viability.	**AO2** Development ensures that the development footprint plan conserves ecological features (including significant vegetation communities listed in Table 8.2.4.3.B, significant flora species listed in Table 8.2.4.3.C, or significant fauna species listed in Table 8.2.4.3.D), koala habitat trees, areas of strategic biodiversity value and wetlands in a spatial configuration which: a. conserves areas within the High ecological significance sub-category or the High ecological significance strategic sub-category that connect	**COMPLIES WITH PO2** The proposed development will not impact on any ecological feature, koala habitat trees, wetlands, or areas of strategic biodiversity value.

	habitat; b. maximises the size and consolidates areas to be conserved for biodiversity purposes on site; c. provides connectivity between areas to be conserved for biodiversity purposes on site; d. excludes filling or excavation from areas to be conserved for biodiversity, except where it is directly associated with habitat restoration.	
Section B—If for filling or excavation		
PO3 Filling or excavation protects the High ecological significance sub-category, the High ecological significance strategic sub-category, the General ecological significance sub-category and the General ecological significance strategic sub-category ecological features (including significant vegetation communities listed in Table 8.2.4.3.B, significant flora species listed in Table 8.2.4.3.C, or significant fauna species listed in Table 8.2.4.3.D), koala habitat trees, areas with strategic biodiversity value, and wetlands, and mitigates the impact on ecological processes. Note—Guidance on identifying koala habitat is included in the Biodiversity areas planning scheme policy. Note—Where proposing development within the High ecological significance sub-category, the High ecological significance strategic sub-category, the General ecological significance sub-category or the General ecological significance strategic sub-category, refer to section 8.2.4.1 Application of this code with regard to satisfying the Purpose of the code and this performance outcome.	**AO3** Development ensures that filling or excavation, other than where directly associated with habitat restoration, is contained within an area located entirely outside of: a. the High ecological significance sub-category; b. the High ecological significance strategic sub-category; c. the General ecological significance sub-category; d. the General ecological significance strategic sub-category; e. the tree protection zone of non-juvenile koala habitat trees as shown in Figure b. Note—A tree survey prepared in accordance with the Biodiversity areas planning scheme policy can assist in demonstrating achievement of acceptable outcome (e).	**COMPLIES WITH PO3 and AO3** The proposed development will not impact on any ecological feature, koala habitat trees, wetlands, or areas of strategic biodiversity value. The site is not within the High ecological significance sub-category, High ecological significance strategic sub-category, General ecological significance sub-category, or General ecological significance strategic sub-category. There are no non-juvenile koala habitat trees on the site.
Section C		
If a site is wholly or partly in the High ecological significance sub-category or the High ecological significance strategic sub-category		NOT APPLICABLE
PO4 Development ensures that ecological features and	**AO4.1** Development:	NOT APPLICABLE

ecological processes, koala habitat trees, areas of strategic biodiversity value, waterways and wetlands within the High ecological significance sub-category or the High ecological significance strategic sub-category are protected, conserved and restored to ensure the area's long-term viability. Note—Where proposing development within the High ecological significance sub-category, the High ecological significance strategic sub-category, the General ecological significance sub-category or the General ecological significance strategic sub-category, refer to section 8.2.4.1 Application of this code with regard to satisfying the Purpose of the code and this performance outcome. The proposed solution must provide the same level of service without significant disruption of biodiversity values or outcomes.	a. ensures that the development footprint, including roads, services, stormwater management infrastructure, any associated filling or excavation works and any fire management access and buffers, are located wholly outside the High ecological significance sub-category or the High ecological significance strategic sub-category; or b. complies with AO4.2, AO4.3 and AO4.4. **AO4.2** Development ensures that the development footprint, design and layout are informed by an ecological assessment which: a. identifies and evaluates biodiversity values, ecological features (including significant vegetation communities listed in Table 8.2.4.3.B, significant flora species listed in Table 8.2.4.3.C, or significant fauna species listed in Table 8.2.4.3.D), koala habitat trees, areas of strategic biodiversity value, waterways and wetlands; b. identifies the likely impacts of the development to biodiversity; c. outlines how any potential impacts on biodiversity will be avoided and mitigated. Note—Guidance on completing an ecological assessment, development design and identifying koala habitat are included in the Biodiversity areas planning scheme policy.	
	AO4.3 Development ensures that the development footprint, design and layout conserves ecological features (including significant vegetation communities listed in Table 8.2.4.3.B, significant flora species listed in Table 8.2.4.3.C, or significant fauna species listed in Table 8.2.4.3.D), koala habitat trees and wetlands in a spatial configuration which: a. conserves areas within the High ecological	

	significance sub-category or the High ecological significance strategic sub-category that connect habitat or areas of strategic biodiversity value which have the capacity to connect habitat upon being restored; b. maximises the size and consolidates areas to be conserved for biodiversity purposes on site and in combination with adjoining sites; c. provides connectivity between areas to be conserved for biodiversity purposes on site and with adjoining sites; d. minimises the edge-to-area ratio of areas to be conserved for biodiversity purposes to limit edge effects; e. minimises fragmentation by infrastructure; f. includes a single development footprint plan for each new residential lot to be created which is: i. 1000m^2 or less where on a lot in the Low density residential zone, the Low-medium density residential zone, the Medium density residential zone, the High density residential zone or the Character residential zone; ii. 2500m^2 or less where on a lot in the Environmental management zone, the Conservation zone, the Emerging community zone, the Rural zone or the Rural residential zone; g. excludes filling or excavation from areas to be conserved for biodiversity, except where it is directly associated with habitat restoration. Note—Guidance on development design is included in the Biodiversity areas planning scheme policy.	
	AO4.4 Development is designed to minimise edge effects by	

	locating land uses compatible with the long-term preservation of biodiversity adjacent to areas within the High ecological significance sub-category or the High ecological significance strategic sub-category, including: a. esplanade roads and pathways; b. landscaping or habitat restoration areas consisting of local indigenous plant species; c. open space land uses; d. employee or communal recreation areas; e. stormwater management infrastructure where adopting water sensitive urban design solutions. Note—Guidance on development design to minimise edge effects is included in the Biodiversity areas planning scheme policy.	
If a site is wholly or partly in the High ecological significance sub-category or the High ecological significance strategic sub-category, where involving a new road		NOT APPLICABLE
PO5 Development for a road is designed and constructed to facilitate the safe movement of native fauna.	**AO5** Development incorporates location-specific wildlife movement solutions, on any roads which dissect an area within the High ecological significance sub-category or the High ecological significance strategic sub-category. Note—Locations for wildlife movement solutions may be indicated on the Streetscape hierarchy overlay mapping. Guidance on wildlife movement infrastructure is included in the Infrastructure design planning scheme policy	NOT APPLICABLE
If a site is wholly or partly in the General ecological significance sub-category or the General ecological significance strategic sub-category		NOT APPLICABLE
PO6 Development ensures that ecological features and ecological processes, koala habitat trees, areas of strategic biodiversity value and wetlands within the General ecological significance sub-category or the General ecological significance strategic sub-category area are protected, conserved and restored to ensure the area's long-term viability.	**AO6.1** Development: a. ensures that the development footprint including roads, services, stormwater management infrastructure, any associated filling or excavation works and any fire management access and buffers, are located wholly outside the General ecological significance sub-category or the	NOT APPLICABLE

Note—Where proposing development within the High ecological significance sub-category, the High ecological significance strategic sub-category, the General ecological significance sub-category or the General ecological significance strategic sub-category, refer to section 8.2.4.1 Application of this code with regard to satisfying the Purpose of the code and this performance outcome. The proposed solution must provide the same level of service without significant disruption of biodiversity values or outcomes.	General ecological significance strategic sub-category; or b. Complies with AO6.2 and AO6.3 **AO6.2** Development ensures that the development footprint, design and layout are informed by an ecological assessment which: a. identifies and evaluates biodiversity values, ecological features (including significant vegetation communities listed in Table 8.2.4.3.B, significant flora species listed in Table 8.2.4.3.C, or significant fauna species listed in Table 8.2.4.3.D), koala habitat trees, areas of strategic biodiversity value, waterways and wetlands; b. identifies the likely impacts of the development to biodiversity; c. outlines how any potential impacts on biodiversity will be avoided and mitigated. Note—Guidance on completing an ecological assessment, development design and identifying koala habitat are included in the Biodiversity areas planning scheme policy.	
	AO6.3 Development ensures that the development footprint, design and layout conserves ecological features (including significant vegetation communities listed in Table 8.2.4.3.B, significant flora species listed in Table 8.2.4.3.C, or significant fauna species listed in Table 8.2.4.3.D), koala habitat trees, waterways and wetlands in a spatial configuration which: a. maximises the size and consolidates areas of strategic biodiversity value to be conserved for biodiversity purposes on site and in combination with adjoining sites; b. maximises connectivity between areas to be conserved for biodiversity purposes on site and	

	with adjoining sites; c. minimises the edge-to-area ratio of areas to be conserved for biodiversity purposes to limit edge effects; d. minimises fragmentation by infrastructure; e. includes a single development footprint plan for each new residential lot to be created which is: i. 1000m^2 or less where on a lot in the Low density residential zone, the Low-medium density residential zone, the Medium density residential zone, or the Character residential zone; or ii. 2500m^2 or less where on a lot in the Environmental management zone, the Conservation zone, the Emerging community zone, the Rural zone or the Rural residential zone; f. excludes filling or excavation from areas to be conserved for biodiversity except where it is directly associated with habitat restoration or revegetation works. Note—Guidance on development design is included in the Biodiversity areas planning scheme policy.	
If a site is wholly or partly in the Koala habitat area sub-category, where not in the High ecological significance sub-category, High ecological significance strategic sub-category, General ecological significance sub-category or General ecological significance strategic sub-category		
PO7 Development is located and designed to protect and enhance koala habitat by: a. reducing threats to resident and transient koalas; b. protecting the maximum number of non-juvenile koala habitat trees in the Koala habitat area sub-category;	**AO7.1** Development ensures that the development footprint, design and layout, including roads, are informed by an ecological assessment which identifies koala habitat trees, movement corridors and the likely impacts to koala habitat as a result of the development. Note—Guidance on identifying koala habitat, completing an ecological assessment and designing development to protect koalas is included in the Biodiversity areas planning scheme policy.	**COMPLIES WITH AO7.1** An Ecological Assessment has been prepared, and a detailed Koala Impact Assessment has been undertaken. Given the lack of Koala habitat trees on or within 280 m of the subject site, it has been concluded that the proposed development will not result in any impacts on

c. consolidating and maximising the size of areas to be conserved on site and in combination with adjoining sites; d. minimising the edge-to-area ratio of areas to be conserved, to limit edge effects; e. providing connectivity and safe koala movement between koala habitat areas. f. minimising fragmentation by infrastructure, particularly roads; g. excluding filling or excavation from areas to be conserved. Note—Guidance on identifying koala habitat is included in the Biodiversity areas planning scheme policy. Note—Where proposing development within the High ecological significance sub-category, the High ecological significance strategic sub-category, the General ecological significance sub-category or the General ecological significance strategic sub-category, refer to section 8.2.4.1 Application of this code with regard to satisfying the Purpose of the code and this performance outcome. The proposed solution must provide the same level of service without significant disruption of biodiversity values or outcomes.	**AO7.2** Development ensures that the development footprint, design and layout: a. protects non-juvenile koala habitat trees; b. maximises the size and consolidates areas to be conserved as koala habitat on site and in combination with adjoining sites; c. maximises connectivity between non-juvenile koala habitat trees which will be conserved on site and with adjoining sites; d. excludes filling or excavation from the tree protection zone of non-juvenile koala habitat trees. Refer to Figure b. **AO7.3** Development ensures that landscaping and open space areas incorporate koala habitat trees.	Koalas. **COMPLIES WITH AO7.2** No non-juvenile Koala habitat trees are present on the site. No mapped or field verified Koala habitat is present on the site or within 280 m of the site. **CAN COMPLY WITH AO7.3** As there is no highly connected Koala habitat within or surrounding the site, the requirement to plant Koala habitat trees within the landscaping areas is unlikely to provide a stepping-stone for Koalas through the landscape. Nevertheless, it can be an approval condition for Koala habitat trees to be included in the landscape planting palette.
PO8 Development design and layout facilitates the safe movement of koalas through the landscape.	**AO8.1** Development ensures that fencing or other barriers are designed to allow safe koala movement, and to exclude koalas from areas containing domestic or security dogs. Note—Guidance on designing development to protect koalas is included in the Biodiversity areas planning scheme policy. **AO8.2** Development incorporates infrastructure solutions which facilitate the movement of koalas across a road which dissects bushland within the Koala habitat area sub-category. Note—Guidance on wildlife movement solutions suited to use by koalas is included in the Biodiversity areas planning scheme policy. Note—Further guidance on wildlife movement solutions is included in the Infrastructure design planning scheme policy.	**COMPLIES WITH PO8** Safe movement of Koalas will not be compromised by the proposed development, and it will not dissect bushland habitat. Koala habitat within 1 km of the site is separated by distances of approximately 500 m. Existing safe movement through the landscape is limited by the requirement for Koalas to cross expanses of cleared land, residential communities, and roads
If a site is wholly or partly located in the High ecological significance sub-category, the High ecological		NOT APPLICABLE

significance strategic sub-category, the General ecological significance sub-category or the General ecological significance strategic sub-category, other than for a dwelling house		
PO9 Development which has or is likely to have a significant residual impact on a matter of State environmental significance or a matter of local environmental significance, after all reasonable on-site mitigation measures have been or will be undertaken, provides an environmental offset. Note— Environmental offsets are provided in compliance with the Queensland environmental offsets framework and the Offsets planning scheme policy.	**AO9** No acceptable outcome is prescribed.	NOT APPLICABLE

Appendix C

Rochedale Urban Community Neighbourhood Plan

7.2.18.4 Rochedale urban community neighbourhood plan code

7.2.18.4.1 Application

1. This code applies to assessing a material change of use, reconfiguring a lot, operational work or building work in the Rochedale urban community neighbourhood plan area if:
    a. assessable development where this code is an applicable code identified in the assessment benchmarks column of a table of assessment for a neighbourhood plan (section 5.9); or
    b. impact assessable development.
2. Land within the Rochedale urban community neighbourhood plan area is identified on the NPM-018.4 Rochedale urban community neighbourhood plan map and includes the following precincts:
    a. Town centre precinct (Rochedale urban community neighbourhood plan/NPP-001);
    b. Neighbourhood centre and business service centre precinct (Rochedale urban community neighbourhood plan/NPP-002);
    c. Business park and gateway civic precinct (Rochedale urban community neighbourhood plan/NPP-003):
        i. Business park sub-precinct (Rochedale urban community neighbourhood plan/NPP-003a);
        ii. Gateway civic sub-precinct (Rochedale urban community neighbourhood plan/NPP-003b).
    d. Future industry precinct (Rochedale urban community neighbourhood plan/NPP-004);
    e. Potential development area precinct (Rochedale urban community neighbourhood plan/NPP-005):
        i. Very low density residential sub-precinct (Rochedale urban community neighbourhood plan/NPP-005a);
        ii. Low density residential sub-precinct (Rochedale urban community neighbourhood plan/NPP-005b);
        iii. Low—medium density residential sub-precinct (Rochedale urban community neighbourhood plan/NPP-005c);
        iv. Mixed use sub-precinct (Rochedale urban community neighbourhood plan/NPP-005d);
        v. Proposed busway station sub-precinct (Rochedale urban community neighbourhood plan/NPP-005e);
        vi. Community uses sub-precinct (Rochedale urban community neighbourhood plan/NPP-005f).
3. When using this code, reference should be made to section 1.5, section 5.3.2 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—This neighbourhood plan includes a table of assessment with variations to categories of development and assessment. Refer to Table 5.9.59.A, Table 5.9.59.B, Table 5.9.59.C and Table 5.9.59.D.

7.2.18.4.2 Purpose

1. The purpose of the Rochedale urban community neighbourhood plan code is to provide finer grained planning at a local level for the Rochedale urban community neighbourhood plan area.
2. The purpose of the Rochedale urban community neighbourhood plan code will be achieved through overall outcomes including overall outcomes for each precinct of

the neighbourhood plan area.

3. The overall outcomes for the neighbourhood plan area are:
    a. The Rochedale urban community ('Rochedale') is developed as an integrated and master-planned urban community with a mix of uses. These include a range of residential, commercial, industrial and educational uses.
    b. Rochedale will mainly comprise residential areas in a series of neighbourhoods, each with a neighbourhood centre that acts as a focal point. There will be a mix of residential types, sizes, tenure and densities providing housing choice and affordability for all stages of the life cycle to meet diverse community needs. Affordable housing is encouraged through development bonuses. The interface between higher densities and lower densities is managed through building heights decreasing with increasing distance from centres and major roads.
    c. Multiple dwellings are not accommodated in the Low density residential zone, including where in a precinct.
    d. The range of commercial areas maximises the opportunities for local employment, to provide superior business settings and cluster compatible businesses and services.
    e. Koalas and their habitats are protected.
    f. Existing vegetation in parks is retained to provide amenity as well as retain elements of the Rochedale cultural landscape. Opportunity exists for the re-alignment of the local park to the south-east of the Rochedale Road and Ford Road intersection to include an existing mature orchard.
    g. Development incorporates innovative integrated water management strategies which contribute to making Rochedale water efficient.
    h. Core and fringe waterway corridors are located along the existing creek networks of Rochedale and provide for multifunctional uses. Through rehabilitation:
        i. the core waterway corridor provides for water conveyance, protection of waterway health, wildlife movement, vegetation protection, urban amenity and low-impact recreation;
        ii. the fringe waterway corridor, located either side of the core waterway corridor and protecting the core waterway corridor from adverse impacts;
        iii. provides for pedestrian/cycle movement, essential infrastructure and where shown, local parks.
    i. Where safe traffic operation allows, direct lot access will be encouraged to create active frontages and social interaction, streetscape amenity and safety. Direct lot access is not appropriate on the major roads.
    j. The focus of the public transport system in Rochedale will be the Town centre precinct (Rochedale urban community neighbourhood plan/NPP-001). However, the further development of the South East Busway is likely to create a new busway station on Underwood Road. This will provide an opportunity for the surrounding community to receive a much higher level of service.
    k. Land to the east of Rochedale around Ford Road, Alperton Road and Kloske Road supports valued wildlife. The road network must be designed to direct through-traffic away from this area.
    l. The enhancement of movement system connectivity between Rochedale and communities to the west is to be considered in future movement system planning for the area. In particular, improved public and active transport connections are strongly encouraged. Enhancements to the general road system will focus on improving network efficiency and capacity along existing road corridors such as Mt Gravatt-Capalaba Road and Miles Platting Road.
    m. New infrastructure will be provided to the neighbourhood plan area in accordance with Council's Local government infrastructure plan.
    n. The long-term intention for the landfill site is for it to continue operation. Options for the site following the end of landfill activities include a metropolitan park.
    o. Development is of a height, scale and form which is consistent with the amenity and character, community expectations and infrastructure assumptions intended for the relevant precinct, sub-precinct or site and is only developed at a greater height, scale and form where there is both a community need and an economic need for the development.

4. Town centre precinct (Rochedale urban community neighbourhood plan/NPP-001) overall outcomes are:
    a. The Town centre precinct is the main commercial centre for the Rochedale community and is to have the role and function consistent with the District centre zone. It is the central location for retail, community, business and commercial uses in Rochedale. The town centre will contain at least 1 supermarket and supporting shops, as well as business or office uses. Additional facilities, such as for health care service and gymnasium, are encouraged to locate within the precinct, providing residents with local services as well as adding to the centre's vitality.
    b. The precinct provides centrally located bus stops and will be the focus of active and public transport in Rochedale. Residential development is supported and affordable housing is encouraged.
    c. The town centre itself has a sense of place featuring a town square, flanked by buildings with community facilities, and, food and drink outlets, with a strong link to a town park and nearby waterway corridor. The town centre may be developed in stages until the ultimate development is realised.
    d. The town centre is a compact centre with active streetscapes and pedestrian environments and is not dominated by parking. It provides clear access including a town centre main street, vistas and focus to the nearby town park and waterway corridor to the west of the town centre. Refer to Figure c, Figure d and Figure e which reflect the design principles for how the town centre should ultimately develop. These include the relationship between the town park, community facilities and surrounding uses, the location of active frontages and the function and format of the main street.
    e. Through traffic is discouraged from using the main streets by appropriate measures that limit vehicle speed and restrict the road to 2 lanes of moving traffic. The provision of landscaping and kerbside parking assists in achieving a pedestrian-friendly main street. All car parking is accessed via internal town centre roads, not from Miles Platting Road or Gardner Road.
    f. The town square is the pre-eminent civic space within Rochedale and will perform a vital role in facilitating community interaction. The town square is a versatile space which allows for a variety of uses such as community markets and gatherings.
    g. Unrestricted community access is required to promote a sense of community ownership. To achieve this outcome, the town square should be dedicated to the Council for public ownership.
5. Neighbourhood centre and business service centre precinct (Rochedale urban community neighbourhood plan/NPP-002) overall outcomes are:
    a. These centres are located to best service the convenience needs of the surrounding community. Figure a indicates the location for these centres and allows flexibility in siting where 2 corner locations are shown. One of the corner sites is developed as a single, consolidated centre. The remaining corner site is developed in character with the adjoining land uses. The maximum gross floor area of each neighbourhood and business service centre is 1,500m^2. Full-line supermarkets (greater than 1,000m^2 or more than one supermarket activity), discount department stores and retail/bulky goods warehousing are not consistent with the outcomes sought for this precinct.
    b. These centres provide strong links with the pedestrian and cycle networks and parks (where applicable) and surrounding residential precincts. Parks that adjoin a centre provide a focus and orientation for the centre.
    c. Neighbourhood centres, as identified in Figure a, are small convenience centres that provide local services to the surrounding residential neighbourhoods. These services include shops, restaurants and supporting community uses and childcare facilities. The neighbourhood centres have the role and function consistent with a Neighbourhood centre zone.
    d. Business service centres, as identified in Figure a, are small convenience centres that provide local services to the surrounding business community. These services include small food outlets, support office uses for businesses and limited retail. Childcare facilities are not considered compatible with these centres because of their close proximity to the landfill site.
    e. Impact assessable uses that are consistent with the outcomes sought for the precinct include:

i. centre activities (excluding childcare centre in a business service centre);
ii. multiple dwellings.

f. Impact assessable uses that are not consistent with the outcomes sought for the precinct include a childcare centre in a business service centre.

6. Business park and gateway civic precinct (Rochedale urban community neighbourhood plan/NPP-003) overall outcomes are:
   a. This precinct accommodates specialised employment opportunities within Rochedale.
   b. Business park sub-precinct (Rochedale urban community neighbourhood plan/NPP003a):
      i. This sub-precinct forms a buffer area between the Rochedale landfill, the future industry area and residential areas. It accommodates high amenity and low impact industry. Ancillary uses such as cafes are consistent with the outcomes sought. Stand-alone office or retail uses are not consistent with the outcomes sought.
      ii. A function facility is encouraged, adjoining the business service centre and waterway.
      iii. Stand-alone childcare centre facilities are not considered compatible due to the sub-precinct's proximity to the landfill site. However, small-scale childcare facilities that can provide adequate space and equipment to allow active play may be supported where they are ancillary to and integrated with an industry use on the same site.
   c. Gateway civic sub-precinct (Rochedale urban community neighbourhood plan/NPP-003b):
      i. This sub-precinct is in a visible location near the motorways and has signature buildings that act as a gateway into Rochedale. It accommodates offices and related educational facilities. This is the only sub-precinct where a service station is appropriate.
   d. Impact assessable uses that are consistent with the outcomes sought for this precinct include:
      i. if in the Business park sub-precinct (Rochedale urban community neighbourhood plan/NPP-003a):
         A. function facility;
         B. educational establishment where a technical institute;
         C. childcare centre where integrated with an industry on the same site and catering for workers on the site;
         D. service industry;
         E. warehouse;
         F. telecommunications facility where any tower is located 30m from the site boundary of a dwelling house or land included in Low density residential.
      ii. a service station if in the Gateway civic sub-precinct (Rochedale urban community neighbourhood plan/NPP-003b).
   e. Impact assessable uses that are not consistent with the outcomes sought for this precinct include an office if in the Business park sub-precinct.

7. Future industry precinct (Rochedale urban community neighbourhood plan/NPP-004) overall outcomes are:
   a. Waterway corridors are rehabilitated upon development of a site.
   b. It is anticipated that low impact industry to medium impact industry will locate on this site.
   c. Development provides a recreation space appropriate for use by the site's worker population.
   d. Development takes into consideration the site's proximity to Bulimba Creek and its strategic role in forming part of the north—south fauna corridor.

Note—A structure plan is to be prepared in accordance with the Structure planning planning scheme policy for industrial development.

8. Potential development area precinct (Rochedale urban community neighbourhood plan/NPP-005) overall outcomes are:

a. Very low density residential sub-precinct (Rochedale urban community neighbourhood plan/NPP-005a):
    i. This sub-precinct comprises predominantly dwelling houses located to protect and strengthen the ecological values of the precinct.
    ii. Land in this sub-precinct will have a yield of 5 dwellings per hectare and a minimum lot size of 2,000m^2.
    iii. Reconfiguration to create smaller lots may be supported where it can be demonstrated that a better ecological outcome will be achieved and provided that the semi-rural, open space character of the area will not be compromised.
    iv. Impact assessable uses that are not consistent with the outcomes sought for this sub-precinct include:
        A. multiple dwelling;
        B. reconfiguring of lots less than 2,000m^2.
b. Low density residential sub-precinct (Rochedale urban community neighbourhood plan/NPP-005b):
    i. This sub-precinct predominantly comprises a mix of lot sizes for detached dwelling houses with a yield of 14 dwellings per hectare.
    ii. Land located adjoining the low—medium density residential potential development area, within a 400m walkable catchment of local neighbourhood centres lot boundaries or facing onto local parks, will support multiple dwellings with a yield of 16 dwellings per hectare.
    iii. Affordable housing is encouraged.
    iv. Impact assessable uses that are consistent with the outcomes sought include multiple dwellings (where complying with AO20), except where in the Low density residential zone.
c. Low-medium density residential sub-precinct (Rochedale urban community neighbourhood plan/NPP-005c):
    i. This sub-precinct comprises a mix of dwelling houses and multiple dwellings at a yield of 16-25 dwellings per hectare. Multiple dwellings are not accommodated in the Low density residential zone.
    ii. Aged-care accommodation and affordable housing will be supported near neighbourhood centres and the town centre.
d. Mixed use sub-precinct (Rochedale urban community neighbourhood plan/NPP-sub-005d):
    i. This sub-precinct comprises predominantly higher density multiple dwellings located around the Town centre precinct, neighbourhood centres and busway stations. Multiple dwellings are not accommodated in the Low density residential zone.
    ii. Some small-scale commercial activities will be acceptable, where they are compatible with the residential nature of the area. These commercial uses will be on the ground and lower levels of a multiple dwelling, or may be accommodated within the same site in a separate building.
    iii. Affordable housing is encouraged.
    iv. The Mixed use sub-precinct at Underwood Road and at the intersection of Miles Platting Road and Rochedale Road has a yield of 40 dwellings per hectare.
    v. The Mixed use sub-precinct around the Town centre precinct (Rochedale urban community local plan/NPP-001) has a yield of 50 dwellings per hectare.
e. Proposed busway station sub-precinct (Rochedale urban community neighbourhood plan/NPP-005e):
    i. This sub-precinct is intended to accommodate a future busway station. Some commercial development, primarily serving the convenience needs of busway patrons, is considered compatible as part of the initial development of the land for a busway station. The preferred longer term development option is for an integrated mixed use precinct incorporating a component of retail, higher density residential, including elements of affordable housing, and high-quality office uses. Full-line supermarkets (greater than 1,000m^2 or more than one supermarket activity), discount department stores and retail/bulky goods warehousing are not consistent with the outcomes sought for this precinct.

f. Development in the community uses sub-precinct (Rochedale urban community neighbourhood plan/NPP-005f):
   i. Supports the existing community uses located on Rochedale Road to create the opportunity to provide a strong community and educational precinct. The additional land adjoining Redeemer Lutheran College allows uses such as schools, training, community facilities and childcare centre facilities.
   ii. Integrates community uses with the town centre to provide uses such as public meeting places, public halls and a youth activity centre and a childcare centre.
   iii. Encourages the retention and use of the existing community facilities for a range of uses.

7.2.18.4.3 Performance outcomes and acceptable outcomes

Table 7.2.18.4.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
General		
PO1 Development is of a height, scale and form that achieves the intended outcome for the precinct, improves the amenity of the neighbourhood plan area, contributes to a cohesive streetscape and built form character and is: a. consistent with the anticipated density and assumed infrastructure demand; b. aligned to community expectations about the number of storeys to be built; c. proportionate to and commensurate with the utility of the site area and frontage width; d. designed to avoid a significant and undue adverse amenity impact to adjoining development; e. sited to enable existing and future buildings to be well separated from each other and to avoid affecting the potential development of an adjoining site. Note—Development that exceeds the intended number of storeys or building height can place disproportionate pressure on the transport network, public space or community facilities in particular. Note—Development that is over-scaled for its site can result in an undesirable dominance of vehicle access, parking and manoeuvring areas that significantly reduce streetscape character and amenity.	**AO1** Development complies with the number of storeys and building height in Table 7.2.18.4.3.B. Note—Neighbourhood plans will mostly specify the maximum number of storeys where zone outcomes have been varied in relation to building height. Some neighbourhood plans may also specify the height in metres. Development must comply with both parameters where maximum number of storeys and height in metres are specified.	TO BE ADDRESSED BY OTHERS
PO2 Development protects significant existing vegetation.	**AO2** No acceptable outcome is prescribed.	**COMPLIES WITH PO2** There is no significant vegetation on the subject site. The tree impact plan provides details of the species, their size, and location within the subject site.

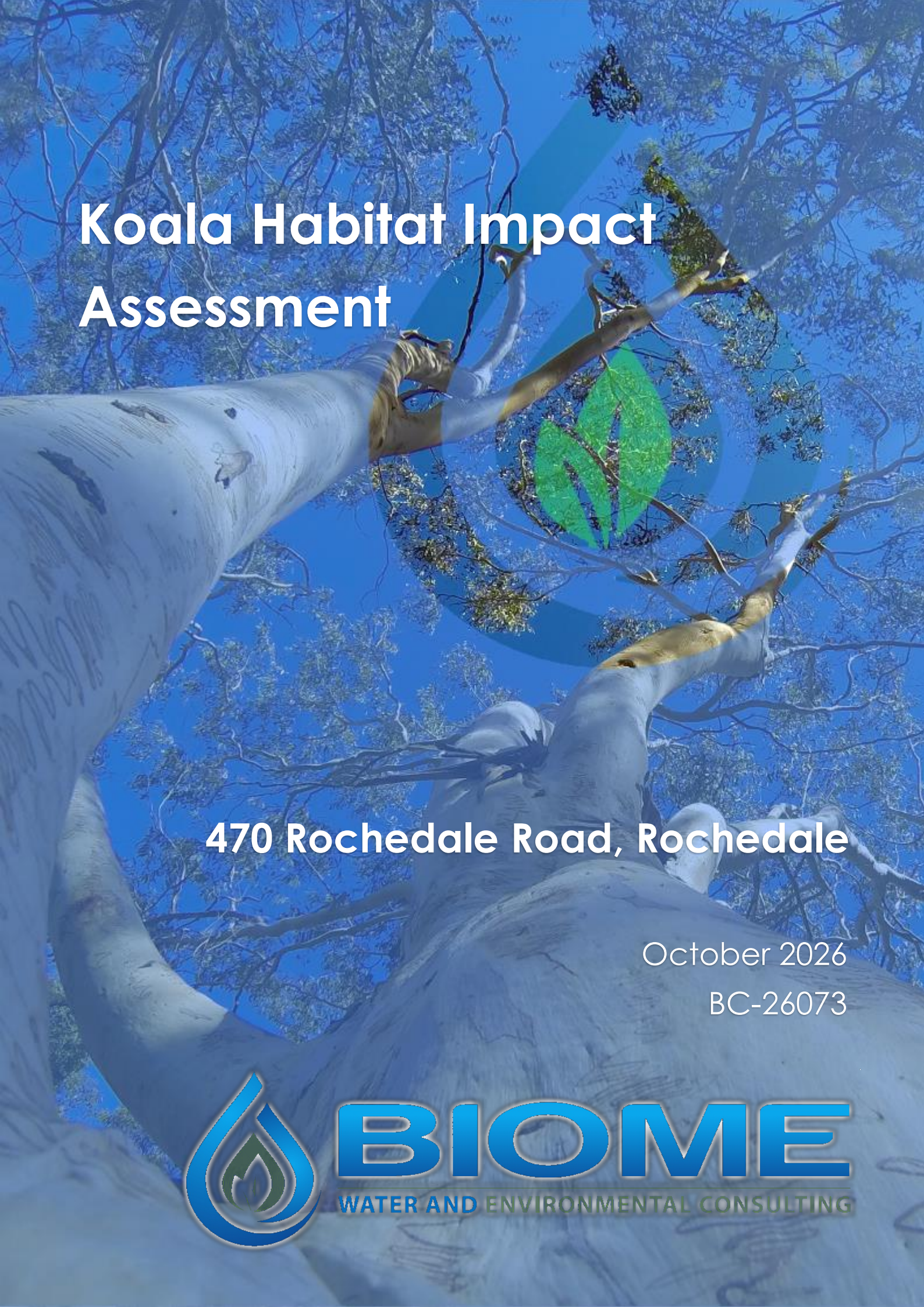
PO3 Development avoids interim conflicts with nearby agricultural uses.	**AO3** Development does not occur within 500m of poultry sheds until the operation ceases.	TO BE ADDRESSED BY OTHERS
PO4 Development protects koala habitat within the neighbourhood plan area.	**AO4.1** Development including the development footprint and roads does not adversely impact on koalas or their habitat. Note—A tree survey plan can assist in demonstrating compliance. Guidance on koala habitat, completing a tree survey and designing development to protect koalas, is included in the Biodiversity areas planning scheme policy. **AO4.2** Development including the development footprint, design and layout: a. protects non-juvenile koala habitat trees; b. maximises the size and consolidates areas to be conserved as koala habitat on-site and in combination with adjoining sites; c. maximises connectivity between non-juvenile koala habitat trees which will be conserved on site and with adjoining sites; d. excludes filling or excavation from the tree protection zone of non-juvenile koala habitat trees.	**COMPLIES WITH PO4** The development will not result in the loss of any mapped or field verified Koala habitat.
	AO4.3 Development incorporates koala habitat trees in landscaping and open space areas. Note—Guidance on koala habitat trees in Brisbane is provided in the Biodiversity areas planning scheme policy.	
PO5 Development design and layout facilitates the safe movement of koalas through the landscape.	**AO5** Development, if including fencing or other barriers (including during construction phase), is designed: a. to allow safe koala movement where there is direct threat of injury or death to koalas from incompatible land use activities;	**COMPLIES WITH AO5** Safe movement of Koalas will not be compromised by the proposed development. Existing safe movement through the landscape is limited by the requirement for koalas to cross expanses of cleared land, residential communities, and roads. As the site currently does not

	b. to exclude koalas from areas containing domestic or security dogs. Note—Refer to the Queensland Government Koala Safety Fencing and Measures Guideline for further guidance.	provide habitat for koala, the proposed development will not directly result in an increased risk of injury or death.
PO6 Development protects, restores and secures habitat areas and ecological corridors as shown in Figure a.	**AO6.1** Development, if including fencing: a. enables the unobstructed movement of fauna to outside the corridor; b. enables the unobstructed movement of fauna within the corridor. **AO6.2** Development, if the site includes land within the Habitat areas and ecological corridors (public) shown in Figure a: a. the habitat area and ecological corridor is rehabilitated and stabilised in accordance with an approved rehabilitation plan; b. at the completion of rehabilitation, the land is transferred to Council for public ownership and included in the Conservation zone. Note—Council will require the submission of a rehabilitation plan to demonstrate achievement of this outcome. Rehabilitation is to be: • completed within 1 year of the operational works approval being granted; • maintained for a minimum of 3 years, removing rubbish and weeds, replacing damaged and dead vegetation and managing erosion.	**NOT APPLICABLE** The subject site is not mapped as within a habitat area or ecological corridor.
	AO6.3 Development, if the site includes land within the habitat areas and ecological corridors (private) shown in Figure a: a. the habitat area and ecological corridor is rehabilitated and stabilised in accordance with an approved rehabilitation plan; b. land is secured with covenants or other long-term management agreements as a condition of development approval to ensure the protection of	

	vegetation within the corridor. Note—Council will require the submission of a rehabilitation plan to demonstrate achievement of this outcome. Rehabilitation is to be: • completed within 1 year of the operational works approval being granted; • maintained for a minimum period of 3 years, removing rubbish and weeds, replacing damaged and dead vegetation and managing erosion.	

NOTE: BALANCE OF PLAN CODE NOT RELEVANT TO ENVIRONMENTAL MATTERS

Koala Habitat Impact Assessment



470 Rochedale Road, Rochedale

October 2026

BC-26073

BIOME

WATER AND ENVIRONMENTAL CONSULTING

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Author	Nadya Lees BSc (Hons)
Reviewed	Lexi Brownhall BEnvSc
Approved	Brad Comley CEnvP MEIANZ, MIEAust, MSc, BAppSc

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Biome Consulting Pty Ltd
ABN: 86 166 087 476

PO Box 3469, SOUTHPORT QLD 4215
Office: 5532 7779
Email: admin@BIOMEconsulting.com.au
Internet: www.BIOMEconsulting.com.au

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In preparing this assessment, BIOME Consulting Pty Ltd exercised reasonable judgement, consistent with the accepted level of skill and care ordinarily exercised by an environmental professional. The author of the report is a qualified ecologist and has applied their understanding of statutory provisions based on their experience. The interpretation of these provisions, as stated above, should be verified by assessment agencies via pre-lodgement advice.

This letter has been based on applicable legislation at the date of issue and remains current unless the legislation is amended.

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1 Introduction

A residential subdivision is proposed over 470 Rochedale Road, Rochedale, hereafter referred to as 'the site'.

The subsequent clearing to facilitate the construction of the development will not result in the loss of mapped Koala habitat; however, the site is within a Koala Priority Area and is also within a Koala Broad Hectare Area.

The purpose of this report is to undertake an assessment of the proposed project and its potential risks to the Koala (*Phascolarctos cinereus*). The Koala is listed as an endangered species under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the Queensland *Nature Conservation Act 1992*.

1.1 Site Context

The land on which the development is proposed is located at 470 Rochedale Road, Rochedale and is formally known as Lot 2 on RP97162 (Figure 1.1). It is freehold land with an area of 21,711 m^2.

The site has road frontage to Rochedale Road on the western boundary

Agricultural land uses are present to the west. Residential development is present to the south, and a development application is under assessment for the site to the immediate north.

1.1.1 Land Use

The site has historically been used as a commercial plant nursery.

1.1.2 Environmental Setting

The site has very little variation in relief, sloping from south to north, with an elevation change from 73 m ASL to 71 m ASL.

Stormwater runoff is directed via overland flow to a constructed shallow drainage line on the lot to the immediate east.

The vegetation on the site largely comprises exotic species. Native species on the site are not endemic to the region or the pre-clearing regional ecosystem and exist in a landscaped setting. There are no Koala habitat trees on the site.



Figure 1.1 Site Location

2 Proposed Development

The development proposes a multi-lot residential development. An internal road with provision for future connections to surrounding developments and a stormwater drainage reserve are included in the plan of development, as illustrated in Figure 2.1.



Figure 2.1 Plan of Development

3 Matters of State Environmental Significance

Matters of State Environmental Significance (MSES) include conservation areas, wetlands, vegetation, and wildlife habitat. MSES mapping layers are available online from Queensland Globe and provide a visual representation of matters affecting the site.

The following MSES are mapped over the site:

- Category X Regulated Vegetation
- Koala Priority Area; and
- Koala Broad Hectare Area.

A summary of MSES, as defined in the State Planning Policy, and their presence on the subject site is presented in Table 3.1. No MSES are present on the site.

Table 3.1 MSES Summary

MSES	Present on site
Endangered regional ecosystems	No regional ecosystems are mapped over the site.
Of concern regional ecosystems	No regional ecosystems are mapped over the site.
Regional ecosystems that intersect with an area shown as a wetland on the Vegetation Management Wetlands Map	No regional ecosystems are mapped over the site.
Regional ecosystems that are located within the distance listed below from the defining banks of a watercourse: • Stream order 1 or 2 – 10 m • Stream order 3 or 4 – 25 m • Stream order 5 or greater – 50 m	No regional ecosystems are mapped over the site. No waterways are present.
Areas on the essential habitat map for an animal that is critically endangered, endangered, or vulnerable fauna or flora	No Essential habitat is mapped over the site
Connectivity area	The site does not form part of a connectivity area.
High ecological significance wetlands shown on the map of Queensland wetland environmental values under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019	No high ecological significant wetlands are mapped over the site.
Wetlands and watercourses in high ecological value waters	No high ecological value waters are mapped over the site.
Designated precincts in a strategic environmental area	The site is not within a strategic environmental area of a designated precinct.
An area that is shown as a high-risk area on the flora survey trigger map and contains plants that are critically endangered, endangered, or vulnerable	The site is not within a high-risk area for protected plants.
An area that is not shown as a high-risk area on the flora survey trigger map, to the extent the area contains plants that are critically endangered, endangered, or vulnerable.	No threatened flora species were recorded on the site.
Habitat for an animal that is critically endangered, endangered, vulnerable, or a special least concern	No habitat of threatened species is present on the site.

MSES	Present on site
Koala habitat areas under the Nature Conservation (Koala) Conservation Plan 2017	The development footprint does not intersect with the mapped Core Koala Habitat.
Protected areas	The development site is not within a protected area.
Highly protected zones of state marine parks	The site is not within a marine park.
Fish habitat areas under the *Fisheries Act 1994*	No fish habitat areas are mapped over or proximal to the site.
Waterways providing for fish passage	No waterways are present within the development footprint.
Marine plants within the meaning of the *Fisheries Act 1994*	There are no marine plants present.
Legally secured offset areas	The site is not a legally secured offset area.

3.1 Queensland Government Vegetation Mapping

The Queensland Government maps areas of remnant, regrowth, and non-remnant vegetation across the State (regulated vegetation management map). The remnant and regrowth vegetation are further classified into regional ecosystems based on biogeographic region, land zone, and dominant vegetation.

The site is mapped, in its entirety, as non-remnant Category X vegetation.

3.1.1 Vegetation Clearing Exemptions

As per Schedule 10, Part 3, Division 1, Section 4, (1) of the *Planning Regulation 2017*, clearing of native vegetation is not prohibited or assessable development when it falls within the provisions of Exempt Clearing Work as defined in Schedule 21, can be undertaken per an Accepted Development Clearing Code, or is for a relevant purpose.

Exempt Clearing Work

Pursuant to the *Planning Regulation* Schedule 21, Part 2, 2 (d), clearing in a Category X area is Exempt Clearing Work.

3.2 Koala Habitat Mapping

The Queensland Government has mapped and regulates clearing in Koala habitat. There are three categories of Koala habitat mapping:

- Koala Priority Areas;
- Koala Habitat Areas – Core Koala Habitat and Locally Refined Koala Habitat; and
- Koala Broad Hectare Areas.

The site, in its entirety, is mapped as within a Koala Priority Area and a Koala Broad Hectare Area.

3.2.1 Koala Priority Areas

The Queensland government has identified priority areas for management actions to achieve the highest likelihood of conservation outcomes for Koalas in southeast Queensland. This

has included prioritising areas of high-quality Koala habitat with a high likelihood of successful threat management.

The entire site is located within a Koala Priority Area.

Assessment benchmarks prescribed under Schedule 11, Part 2 of the *Planning Regulation 2017*, require that development provides, on the premises, measures to maximise safe Koala movement within the premises and between Koala habitat patches. This may be achieved by ensuring each structure is more than 50 m from a Koala Habitat Area, or where this is not possible, the development is to comply with the following:

a) Any change to the condition of soil as a result of the development does not adversely affect a Koala habitat area;
b) Any alteration of hydrological flows as a result of the development does not adversely affect a Koala habitat area;
c) Any landscaping associated with the development that involves planting non-native vegetation does not adversely affect a Koala habitat area;
d) The development does not adversely affect a Koala habitat area by resulting in the increased growth or spread of weeds in the Koala habitat area;
e) A building, structure or works associated with the development is located to minimise the amount of vegetation required to be cleared for safety purposes.

3.2.2 Core Koala Areas

Core Koala Habitat areas have been mapped and represent the best quality Koala habitat areas, based on the modelling of biophysical measures including climate, suitable vegetation for both food and shelter, and Koala sightings (DETSI, 2025). Core Koala Habitat mapping has been prepared to support the implementation of the *South-East Queensland Koala Conservation Strategy 2020-2025*.

There is no Core Koala Habitat mapped over the site.

3.2.3 Koala Broad Hectare Areas

In addition to Koala Priority Areas, the subject site is within a Koala Broad Hectare Area. These are areas with pre-existing, long-term, established development commitments. Koala broad-hectare areas include areas identified under the *Queensland Housing Affordability Strategy* and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Assessment benchmarks in Schedule 11, Part 3 of the *Planning Regulation* have been developed to ensure development in an identified Koala Broad Hectare Area incorporates site-based measures to maximise the safe and unimpeded movement of Koalas through the landscape, allow Koalas to safely disperse from an area being cleared and reduce the risk of death or injury. However, these assessment benchmarks do not apply when a development results in a total area on the premises of 500 m^2 or less of Koala habitat area being cleared of native vegetation. Consequently, the assessment benchmarks for development in a Koala Broad Hectare Area do not apply to the development.

4 Koala Habitat Assessment

Koala habitat is defined as areas of land where the resources and conditions are present that are necessary to enable the survival and reproduction of the Koala and include dispersal corridors. In addition, Koala habitat provides for continuous or intermittent persistence and, ideally, should also be resilient to climatic pressures.

4.1 Biology and Ecology

4.1.1 Distribution

Koalas are widely distributed throughout Queensland, New South Wales, and Victoria and also occur within a small area in south-eastern South Australia. Most of the populations in New South Wales and Queensland were found to be declining rapidly, whereas populations in Victoria and South Australia are stable, and in some cases, intensively managed due to over-abundance (Department of Agriculture, Water and the Environment (DAWE), 2022a).

4.1.2 Habitat Associations

Koalas have a distinct association with woodlands and forest habitat types dominated by eucalypt species (Hume and Esson, 1993; Moore and Foley, 2000; Martin et al., 2008), particularly those growing on alluvial or other fertile soils (Moore et al., 2004; Crowther et al., 2009).

Koala habitat differs regionally because they are strongly influenced by local climatic and landform attributes (cited in DAWE, 2022a). Both remnant vegetation (undisturbed) and non-remnant vegetation (e.g. disturbed or regrowth) can be high-quality Koala habitat (Youngentob et al., 2021).

Key factors that influence the quality of habitat for Koalas are the presence and density of preferred food tree species, food trees' nutritional foliar chemistry, shelter trees, and vegetation structure (cited in DAWE, 2022a).

4.1.3 Food

While Koalas will use a variety of trees, including non-eucalypts, for feeding and resting (Dique et al., 2004; Martin et al., 2008), they exhibit distinct, localised feeding preferences, selecting some species in favour of others and, in some cases, individual trees (Pahl and Hume, 1990).

Feed trees are visited repeatedly and often shared with other individuals, although not concurrently (Martin et al., 2008).

In south-east Queensland, highly preferred species include Forest Red Gum (*Eucalyptus tereticornis*), Grey Gums (*E. propinqua* and *E. biturbinata*), Tallowwood (*E. microcorys*) and Red Stringybark (*E. resinifera*) (DERM, 2008).

4.1.4 Home Range

Koalas can persist in highly fragmented landscapes, and the amount of area needed differs widely across their range due to spatial and temporal differences in the quality and availability of resources (Youngentob et al., 2021).

Individual animals, although solitary, coexist within overlapping home ranges. Home range sizes vary from an average home range size of 34 ha for males and 15 ha for females in

southeast Queensland (White, 1999). In areas where there is a high proportion of preferred food trees, the home ranges of Koalas are smaller (DERM, 2008).

4.1.5 Reproduction

Female Koalas can reproduce annually from two years of age, giving birth predominantly from November to January. A joey will leave the pouch at around six months and be independent at 12 months of age. Sub-adult animals (approximately 18 months of age) typically leave the maternal home range and disperse to new habitat areas (Dique et al., 2003a).

The movement of adult and sub-adult individuals in the breeding season increases the risk of road kills and dog attacks (DERM, 2008) as Koalas move on the ground between trees.

4.2 Koala Survey

4.2.1 Survey Methods

There is no single technique or widely accepted method to survey Koalas (Wilmott et al. 2019). Consequently, the following techniques were employed to determine Koala presence:

- Scat surveys; and
- Direct observations.

Koala faecal pellets (scats) can be distinguished reasonably well from the scat of most other Australian mammals (Jiang et al., 2019) and are often easier to locate than the Koalas themselves (cited in Youngentob et al., 2021). Koala scats can persist in a natural environment and be clearly recognisable for up to two years (Jurkis et al., 1994). As such, scat surveys can provide valuable information about Koala habitat occupancy.

Ground-based visual inspections of the canopy were made during daylight hours.

Where present, searches were made for Koala scats within a 1 m radius of the trunk of every preferred Koala food tree within the subject site. A visual inspection for the distinctive scratch marks of the Koala on smooth-barked trees was also conducted.

One experienced field ecologist conducted the surveys.

4.2.2 Survey Limitations

Koalas are difficult to survey directly because of their cryptic habits and their low population density. Accordingly, scat surveys are used as a surrogate for or complement to direct observations. However, the detectability of scats is variable and influenced by decay rate and ground cover/litter complexity (Cristescu et al., 2012).

4.2.3 Survey Results

There are no Koala habitat trees on the site. No evidence of Koala, either direct (sightings) or indirect (scats or scratch marks), was recorded.

4.3 Habitat Connectivity and Fragmentation

Koalas can persist in highly fragmented landscapes, and the amount of area needed differs widely across their range due to spatial and temporal differences in the quality and availability of resources (Youngentob et al., 2021). However, habitat fragmentation reduces or eliminates the ability of Koalas to disperse, which inhibits the ability of Koalas to colonise vacant habitat

or exploit small habitat patches (Lassau et al., 2008). Lack of habitat connectivity may also reduce the viability of Koala populations by limiting access to mates and increasing their vulnerability to predation or vehicle strike as they move from one habitat patch to another.

Koalas can move large distances on the ground. Consequently, connectivity between habitat 'patches' does not require a continuity of vegetation. Scattered trees are stepping-stones between patches (Youngentob, 2021). For this reason, Koalas and Koala populations can persist in highly fragmented landscapes such as peri-urban areas and utilise scattered paddock trees in agricultural land where Koalas regularly move across the ground for tens or even hundreds of meters (cited in Youngentob, 2021).

Through GIS analysis, the on-site vegetation was assessed for connectivity values to adjoining bushland habitat. Connectivity values have been based on:

- Suitability of the adjacent habitat to support the Koala;
- Distance between mapped Koala habitat around the site; and
- Barriers to fauna movement (such as roads and residential areas).

The suitability of the adjacent habitat to support Koalas has been based on the Core Koala Habitat mapping.

Figure 4.1 shows the Core Koala Habitat mapped within 1 km of the subject site. Distances between these habitat patches are at least approximately 500 m, separated by roads, cleared land, and residential properties.

Highly connected habitat for Koalas is considered to include patches separated by distances of less than 200 m. However, the ability of Koalas to safely cross this distance is often overlooked. While predominantly cleared and substantially modified environments may function as stepping stones between habitat patches, the use of these areas by Koalas is likely to increase the risk of predation or vehicle strike.

The site does not form part of a safe movement passage between Core Koala habitat patches in the local area. The distance from the site boundary to the closest habitat area is 280 m.



LEGEND

Subject site

1km radius from the site

Core Koala Habitat

Figure 4.1 Koala Habitat within 1 km of the Site

5 Legislative Compliance

As has been identified in the previous chapters of this report, no Koala habitat trees are present on the site. The site is at least 280 m from the nearest patch of mapped Koala habitat. Koala habitat patches in the local region are largely isolated, with distances between these patches of at least approximately 500 m.

5.1 Compliance with State Legislation

5.1.1 Priority Areas

The *Planning Regulation 2017*, Schedule 11, Part 2 provides the assessment benchmarks for development on premises in a Koala Priority Area not interfering with Koala Habitat, as follows:

a) the development provides, on the premises, the safe Koala movement measures necessary to maximise the safe movement of Koalas—
   i. within a Koala habitat area on the premises; and
   ii. between a Koala habitat area on the premises (the first area) and a Koala habitat area or ecological corridor within 200 m of the first area;

b) either—
   i. each building, structure or works associated with the development is at least 50 m from a Koala habitat area; or
   ii. the development complies with each of the criteria stated below.

For subsection (b)(ii), the criteria are as follows—

- any change to the condition of soil as a result of the development does not adversely affect a Koala habitat area;
- any alteration of hydrological flows as a result of the development does not adversely affect a Koala habitat area;
- any landscaping associated with the development that involves planting non-native vegetation does not adversely affect a Koala habitat area;
- the development does not adversely affect a Koala habitat area by resulting in the increased growth or spread of weeds in the Koala habitat area;
- a building, structure or works associated with the development is located to minimise the amount of vegetation required to be cleared for safety purposes.

Subsection a) does not apply as there are no Koala habitat areas on the site or within 200 m of the site.

The development complies with Subsection b)(i) as the subject site is more than 200 m from mapped Koala habitat areas.

5.1.2 Broad Hectare Areas

The assessment benchmarks for development in Broad Hectare Areas are provided in Schedule 11, Part 3 of the *Planning Regulation*. However, these benchmarks do not apply if the development results in a total area on the premises of 500 m^2 or less of 1 or more Koala habitat areas being cleared of native vegetation.

As no Koala habitat areas are present on the subject site, no further assessment is required.

5.2 Compliance with the Biodiversity Areas Overlay Code

The provisions of Performance or Acceptable Outcomes 7 and 8 of the Biodiversity Areas Overlay Code are to be addressed for development within the Koala Habitat sub-category and not in another ecological significance sub-category. These outcomes seek to protect and enhance Koala habitat by minimising impacts to Koala habitat trees, providing connectivity and safe movement corridors, conserving habitat, and incorporating the planting of Koala habitat trees into the landscape design.

A response to these outcomes is provided in Table 5.1.

5.3 Compliance with the Rochedale Urban Community Neighbourhood Plan Code

The Rochedale Urban Community Neighbourhood Plan Code requires that Koala habitat is protected and provides for safe movement of Koalas through the landscape.

A response to the relevant provisions of the code is presented in Table 5.2.

Table 5.5 Biodiversity Areas Overlay Code Response

Performance Outcome	Acceptable Outcome	Response
PO7 Development is located and designed to protect and enhance Koala habitat by: a. reducing threats to resident and transient Koalas; b. protecting the maximum number of non-juvenile Koala habitat trees in the Koala habitat area sub-category; c. consolidating and maximising the size of areas to be conserved on site and in combination with adjoining sites; d. minimising the edge-to-area ratio of areas to be conserved, to limit edge effects; e. providing connectivity and safe Koala movement between Koala habitat areas. f. minimising fragmentation by infrastructure, particularly roads; g. excluding filling or excavation from areas to be conserved. Note—Guidance on identifying Koala habitat is included in the Biodiversity areas planning scheme policy. Note—Where proposing development within the High ecological significance sub-category, the High ecological significance strategic sub-category, the General ecological significance sub-category or the General ecological significance strategic sub-category, refer to section 8.2.4.1 Application of this code with regard to satisfying the Purpose of the code and this performance outcome. The proposed solution must provide the same level of service without significant disruption of biodiversity values or outcomes.	**AO7.1** Development ensures that the development footprint, design and layout, including roads, are informed by an ecological assessment which identifies Koala habitat trees, movement corridors and the likely impacts to Koala habitat as a result of the development. Note—Guidance on identifying Koala habitat, completing an ecological assessment and designing development to protect Koalas is included in the Biodiversity areas planning scheme policy.	**COMPLIES WITH AO7.1** An Ecological Assessment has been prepared, and a detailed Koala Impact Assessment has been undertaken (this report). Given the lack of Koala habitat trees on or within 280 m of the subject site, it has been concluded that the proposed development will not result in any impacts on Koalas.
	AO7.2 Development ensures that the development footprint, design and layout: a. protects non-juvenile Koala habitat trees; b. maximises the size and consolidates areas to be conserved as Koala habitat on site and in combination with adjoining sites; c. maximises connectivity between non-juvenile Koala habitat trees which will be conserved on site and with adjoining sites; d. excludes filling or excavation from the tree protection zone of non-juvenile Koala habitat trees. Refer to Figure b.	**COMPLIES WITH AO7.2** No non-juvenile Koala habitat trees are present on the site. No mapped or field verified Koala habitat is present on the site or within 280 m of the site.
	AO7.3 Development ensures that landscaping and open space areas incorporate Koala habitat trees.	**CAN COMPLY WITH AO7.3** As there is no highly connected Koala habitat within or surrounding the site, the requirement to

Performance Outcome	Acceptable Outcome	Response
		plant Koala habitat trees within the landscaping areas is unlikely to provide a stepping-stone for Koalas through the landscape. Nevertheless, it can be an approval condition for Koala habitat trees to be included in the landscape planting palette.
PO8 Development design and layout facilitates the safe movement of Koalas through the landscape.	**AO8.1** Development ensures that fencing or other barriers are designed to allow safe Koala movement, and to exclude Koalas from areas containing domestic or security dogs. Note—Guidance on designing development to protect Koalas is included in the Biodiversity areas planning scheme policy.	**COMPLIES WITH PO8** Safe movement of Koalas will not be compromised by the proposed development, and it will not dissect bushland habitat. Koala habitat within 1 km of the site is separated by distances of approximately 500 m. Existing safe movement through the landscape is limited by the requirement for Koalas to cross expanses of cleared land, residential communities, and roads.
	AO8.2 Development incorporates infrastructure solutions which facilitate the movement of Koalas across a road which dissects bushland within the Koala habitat area sub-category. Note—Guidance on wildlife movement solutions suited to use by Koalas is included in the Biodiversity areas planning scheme policy. Note—Further guidance on wildlife movement solutions is included in the Infrastructure design planning scheme policy.	

Table 5.1 Rochedale Urban Community Neighbourhood Plan Code Response

Performance Outcome	Acceptable Outcome	Response
PO4 Development protects Koala habitat within the neighbourhood plan area.	**AO4.1** Development including the development footprint and roads does not adversely impact on Koalas or their habitat. Note—A tree survey plan can assist in demonstrating compliance. Guidance on Koala habitat, completing a tree survey and designing development to protect Koalas, is included in the Biodiversity areas planning scheme policy.	**COMPLIES WITH PO4** The development will not result in the loss of any mapped or field-verified Koala habitat.
	AO4.2 Development including the development footprint, design and layout: a. protects non-juvenile Koala habitat trees; b. maximises the size and consolidates areas to be conserved as Koala habitat on-site and in combination with adjoining sites; c. maximises connectivity between non-juvenile Koala habitat trees which will be conserved on site and with adjoining sites; d. excludes filling or excavation from the tree protection zone of non-juvenile Koala habitat trees.	
	AO4.3 Development incorporates Koala habitat trees in landscaping and open space areas. Note—Guidance on Koala habitat trees in Brisbane is provided in the Biodiversity areas planning scheme policy.	

Performance Outcome	Acceptable Outcome	Response
PO5 Development design and layout facilitates the safe movement of Koalas through the landscape.	**AO5** Development, if including fencing or other barriers (including during construction phase), is designed: a. to allow safe Koala movement where there is direct threat of injury or death to Koalas from incompatible land use activities; b. to exclude Koalas from areas containing domestic or security dogs. Note—Refer to the Queensland Government Koala Safety Fencing and Measures Guideline for further guidance.	**COMPLIES WITH AO5** Safe movement of Koalas will not be compromised by the proposed development. Existing safe movement through the landscape is limited by the requirement for Koalas to cross expanses of cleared land, residential communities, and roads. As the site currently does not provide habitat for Koala, the proposed development will not directly result in an increased risk of injury or death.

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