Matters of National Environmental Significance Management Plan

EPBC -2022/09397 – Post Approval

New Bundaberg Hospital, Thabeban, Queensland
Prepared for Queensland Health

15 May 2025
Job No. 11612

Document Control

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Document Issue

Issue	Date	Prepared By	Checked By
A	06.10.2023	HM	MD
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F	31.01.2025	TC	AD
G	15.05.2025	KB	AD

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Reports and plans by others may be included in this document.

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Abbreviations and Acronyms

DAWE	Department of Agriculture, Water and the Environment
DES	Department of Environment and Science (Qld)
DCCEEW	Department of Climate Change, Energy, Environment and Water
EPBC	*Environment Protection and Biodiversity Conservation Act 1999*
GHFF	Grey-headed Flying-fox *(Pteropus poliocephalus)*
MNES	Matters of National Significance
MP	Management Plan
NCA	*Nature Conservation Act 1992* (Qld)
NCPR	Nature Conservation (Plants) Regulation 2020
OMU	Operational Management Unit
PD	Preliminary Documentation
RAI	Relative Abundance Index
RE	Regional Ecosystem
SEQ	South-east Queensland
SHG	Saunders Havill Group
VMA	*Vegetation Management Act 1992* (Qld)
VCFMP	Vegetation Clearing and Fauna Management Plan
WONS	Weeds of National Significance

1. Introduction

Saunders Havill Group (SHG) act on behalf of Queensland Health to prepare a Matters of National Significance Management Plan for the proposed New Bundaberg Hospital, Thabeban, Queensland (EPBC Reference: 2022/09397). The site is located at Bundaberg Ring Road, Thabeban (Lot 23 on SP212513). This report has been compiled to meet the requirements of EPBC 2022/09397 Approval (refer **Attachment A**) Condition 5, extracted below:

> 5) The approval holder must submit to the **department** for the **Minister's** approval a Matters of Environmental Significance Management Plan (MNES Management Plan)**.** The MNES Management Plan must specify a program of measures that will be implemented to reduce the presence of feral predators (including foxes and cats), and how the effectiveness of the program will be monitored and compared to baseline data for the **Action area**. The measures must be:
>
> i) in line with relevant threat abatement plans including the *Threat abatement plan for predation by the European red fox 2008* and *Threat abatement plan for predation by feral cats 2015*
>
> ii) known effective methods for the control of these species and
>
> iii) supported by scientific evidence

This management plan has been prepared in consideration of the detailed Preliminary Documentation (**PD**), which outlined the requirements of the referral specifically to address the Request for Information to attain an EPBC Act approval. On the 15th July 2022 a referral under the EPBC Act was made to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) for a controlled action assessment (refer **Attachment B – EPBC Controlled Action Decision Notice**). On the 3rd February 2023 this application was deemed a Controlled Action requiring assessment by "Preliminary Documentation".

The Controlled Action decision was based on the determination of potential impacts on the following Matters of National Environmental Significance (MNES):

- Listed threatened species and communities (sections 18 & 18A) protected under Part 3 of the EPBC Act, specifically:
  - Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) (*Phascolarctos cinereus*) – Endangered.
  - Grey-headed Flying-fox (*Pteropus poliocephalus*) – Vulnerable.
  - Greater Glider (*Petauroides volans*) – Endangered.

This management plan includes procedures and protocols for the management of MNES prior to, during and post-vegetation clearing and construction activities to reduce potential adverse impacts. MNES biodiversity values within or near the project area were identified during desktop analysis of Commonwealth, State and Local environmental databases and overlay mapping. Management specifications and principles

incorporated into this MP apply generally to all impacts and focus on incorporating measures to minimise disturbance and avoid conflicts. This MP is to be implemented on approval and within 12 months of commencement of the action.

1.1. Site Summary

The referral area is located within Bundaberg Regional Council and is located approximately 4 kilometres south-west of Bundaberg's CBD. Almost the entire development site is vegetated with Eucalypt woodland, however, this vegetation is subject to some disturbance from fire, historic logging and surrounding land uses. This includes disturbance from construction and other activities associated with the Bundaberg Brewed Drinks facility to the east. The site is bound immediately to the north and west by cleared land earmarked for residential development, with the Bundaberg Airport beyond the cleared land to the west. In the broader landscape, agriculture dominates land use, along with residential development and infrastructure.

Table 1: Site summary

Address	Bundaberg Ring Road, Thabeban, Queensland, 4670
Lot / Plan	Lot 23 on SP212513 Lot 1 on SP285136
Referral Area	64.1 ha
Development Footprint	24.2 ha
Retained Area	41.9 ha

1.2. Project Description

Queensland Health ('the Proponent') seeks to develop a new hospital on land located at Bundaberg Ring Road, Thabeban. The action area is located within the Bundaberg Regional Council (BRC) Local Government Area. The action area is shown as **Figure 1** and **Figure 2**. The proposal includes the development of approximately 24.2 ha for a public hospital and supporting infrastructure and the retention of 41.9 ha of native bushland. The proposed action includes earthworks and vegetation clearing to facilitate the approved development. The EPBC Act approval conditions allow for a total clearing area of 24.46 ha, which includes 23.56 ha of MNES habitat that can be cleared.

The proposal is for a public hospital containing four separate buildings being the main hospital, mental health inpatient unit, the facility support centre, and multi-level car park along with six additional expansion zones. These buildings have been planned in a compact arrangement to the northwest corner of the site to minimise the environmental impact and enable significant existing trees and vegetation to be retained. This approach has also helped reduce the extent of new roads and in-ground services. The hospital will require the construction of two new access roads to facilitate vehicle access to the site. These are:

- A new north-south road to the west of the subject site (Johanna Boulevard extension), connecting with the existing road network at Johanna Boulevard and Eggmolesse Street; and

- A new east-west road to the north of the subject site (East West Road), connecting the Johanna Boulevard extension with Kay McDuff Drive.

The extension of Johanna Boulevard from the north west corner of the project site to the southern extent of the hospital impact area is included in the proposed action along with the full extent of the new east-west road to the north of the subject site. The extent of these access roads are shown in **Figure 3 – Development Layout**.

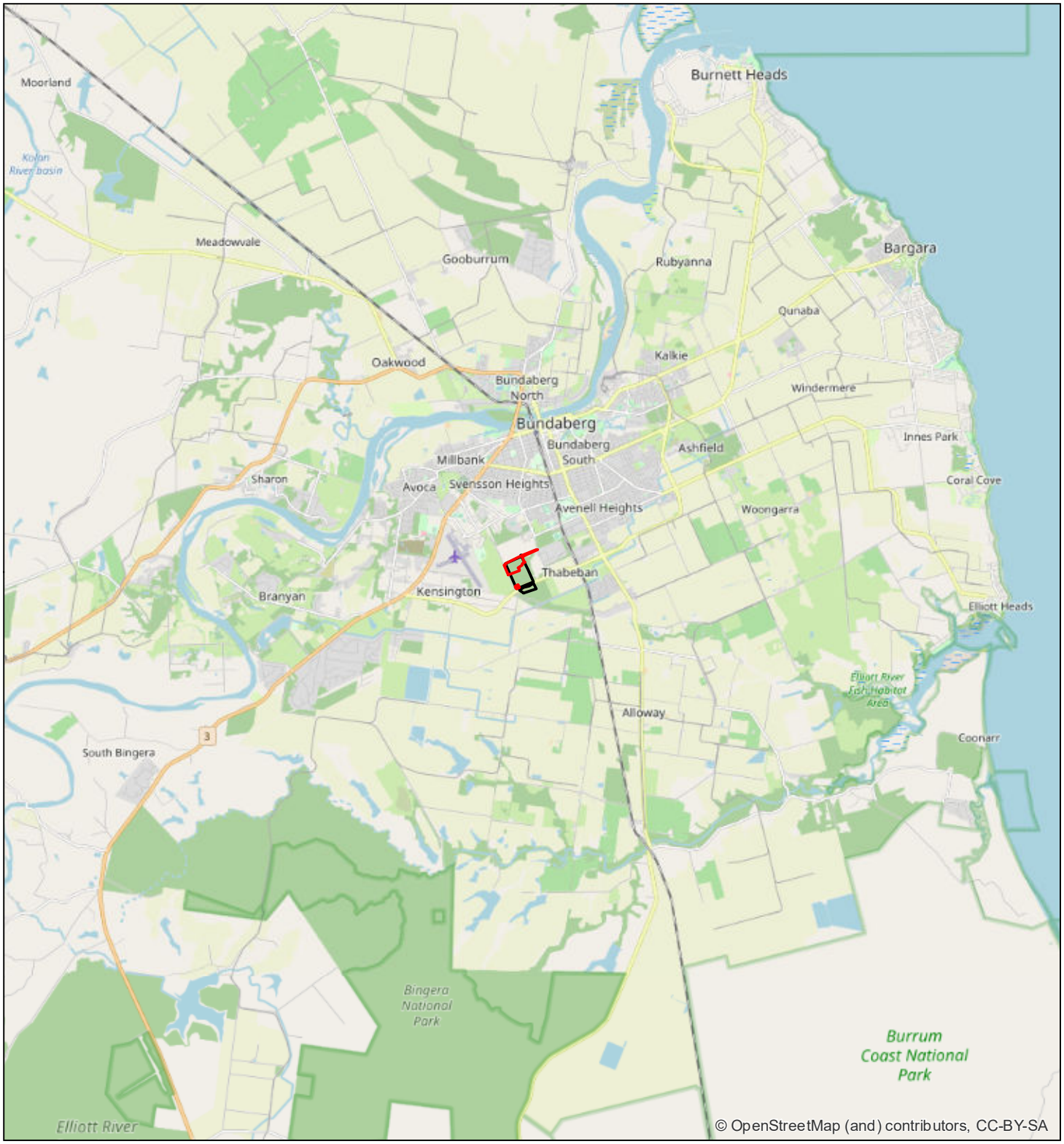
As there is no existing infrastructure, structures or services located inside the property boundary other than a Sunwater irrigation easement on the southern extremity, the project will require the integration of supporting infrastructure including water, sewer and telecommunications, within the road corridors of the two new access roads (Johanna Boulevard extension and East West Road). Electrical infrastructure will also be required with a new zone substation to service the hospital planned for the southern portion of the site (Lot 23 SP212513), requiring approximately 1 ha of vegetation clearing.

The project includes a stormwater management strategy which involves the development of a series of stormwater quality improvement devices and an onsite detention system. This will include vegetated wetlands and drainage swales which are proposed to be neatly integrated into the landscape and landform.

1.3. Relationships to other plans

Various management plans are required to address a range of environmental matters associated with the construction and operation of the Bundaberg Hospital project. The following management plans have been created that are relevant to this MP:

- Species Management Program – Green Tape Solutions (addressing management of animal breeding places under *Nature Conservation Act 1992*)
- Bushfire Hazard Assessment and Management Plan – Green Tape Solutions (To be provided within 6 months of commencement of the operational phase)
- Rehabilitation Management Plan – SHG
- Vegetation Clearing and Fauna Management Plan (VCFMP) – SHG



Legend

- Site DCDB
- Project Disturbance Footprint

Figure 1

Site Context

Queensland Government
Queensland Health

File ref. 11612 E Figure A1 Site Context A
Date 25/10/2023
Project Bundaberg Hospital

0 1 2 3 4 5 km

N

Scale (A4): 1:175,000 [GDA 2020 MGA Z56]

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Layer Source: © State of Queensland 2023

Legend

- Qld DCDB
- Site DCDB
- Project Disturbance Footprint

Figure 2

Site Aerial

Queensland Government
Queensland Health

File ref. 11612 E Figure A2 Site Aerial A
Date 25/10/2023
Project Bundaberg Hospital

0 50 100 150 200 250 m

N

Scale (A4): 1:8,000 [GDA 2020 MGA Z56]

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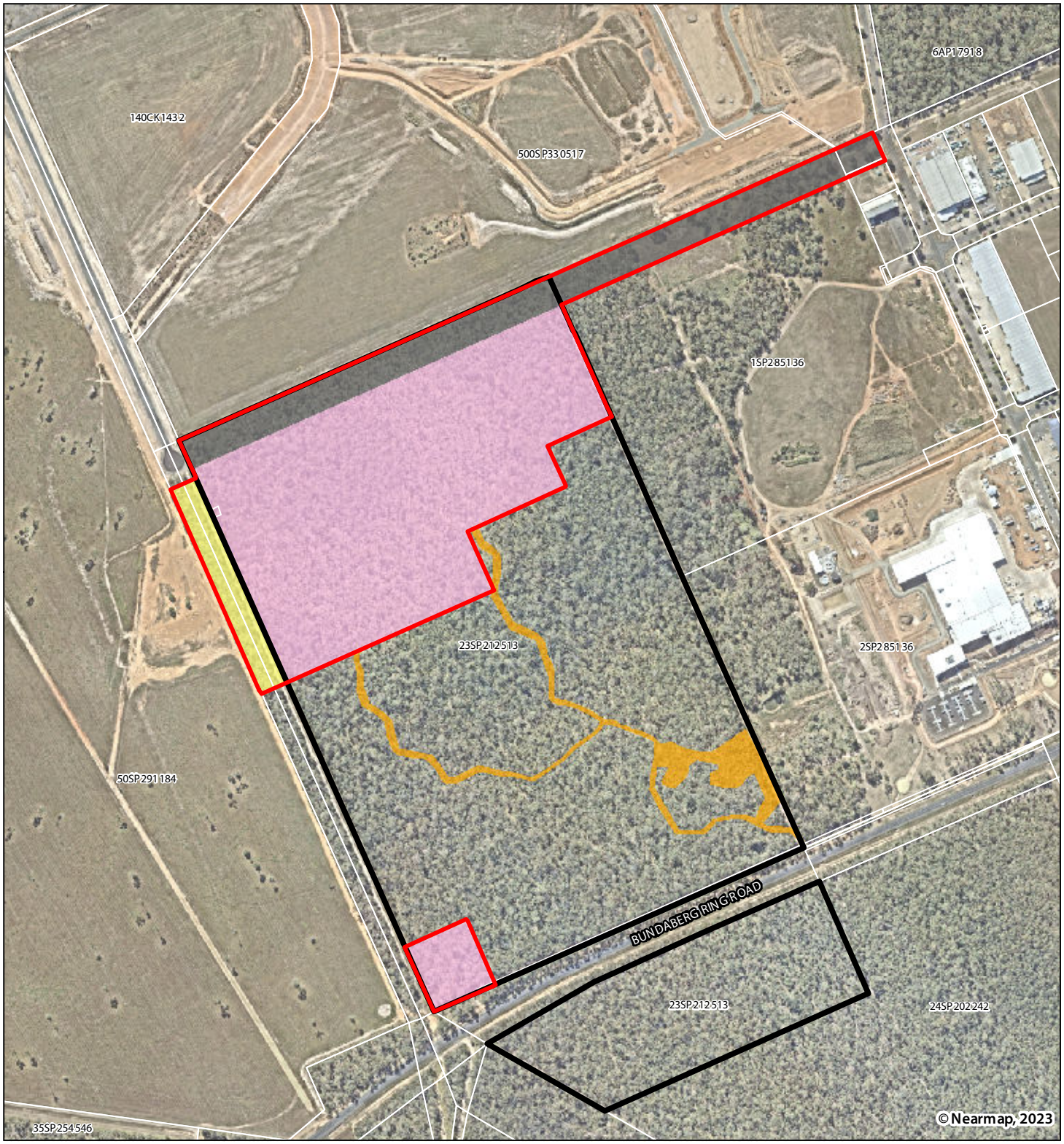
Layer Source: © State of Queensland 2023



Legend

- Qld DCDB
- Site DCDB
- Project Disturbance Footprint [24.2 ha]
- Proposed East-West Connection Road
- Johanna Boulevard Extension
- Development Area
- Stormwater Management Area

Figure 3

Development Footprint

Queensland Government
Queensland Health

File ref. 11612 E Figure A3 Development Footprint A
Date 25/10/2023
Project Bundaberg Hospital

0 50 100 150 200 250 m

N

Scale (A4): 1:8,000 [GDA 2020 MGA Z56]

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Layer Source: © State of Queensland 2023

2. Matters of National Environmental Significance (MNES)

Detailed ecological assessments including targeted threatened species surveys were undertaken as part of the project's referral and preliminary documentation to support the State and Commonwealth approvals processes. The surveys aimed to:

- Assess the project area for presence / absence of threatened flora and fauna species;
- Determine vegetation characteristics and species habitat values;
- Describe the likely adverse impacts on MNES within the project area;
- Determine suitable avoidance and mitigation measures to reduce impacts on MNES;
- Assess the site condition and habitat quality within the impact area.

The key findings from the field ecology surveys for each MNES addressed in this MMP is provided within the following sections. Detailed information including habitat quality within the Project area for each of the MNES is outlined within the Preliminary Documentation (PD).

2.1. Survey Methodology

Field surveys were undertaken during seasonal conditions generally favourable to the detection and identification of flora and fauna species. Field survey methods were determined based on target species and communities and EPBC Act listed species guidelines. Initial site surveys by Green-Tape solutions for EPBC referral were completed during September 2020, July 2022, August 2022, and September 2022 (refer **PD Part B – Ecological Assessment Report**). These surveys involved the following:

- Validation of desktop findings;
- Verification of the floristic structure and composition of vegetation communities present;
- Fauna surveys including diurnal bird surveys, nocturnal searches (spotlighting), camera trap deployment, acoustic detection (Anabat bat detection devices) and targeted searches for conservation-significant species, including a survey by Koala scat-detection dogs;
- Describing the fauna habitat present and recording any incidental fauna sightings;
- Identifying weed species and documenting vegetation disturbance; and
- Assessment of the ecological values on site with respect to the mapped environmental values on the site.

More recent targeted MNES flora and fauna field surveys were conducted by two ecologists from SHG to describe the ecological value of the referral area and potential habitat quality for threatened species (**Table 2**). These surveys were conducted by suitably qualified personnel consistent with the Department's approved survey guidelines and designed to provide results that are representative of the Referral Area. A variety of flora and fauna survey methods were used to detect MNES during the impact assessment surveys in accordance

with applicable Commonwealth and Queensland threatened species and communities survey guidelines including:

- EPBC Act survey guidelines for Australia's threatened mammals (DSEWPC 2011);
- EPBC Act referral guidance for the vulnerable Koala (DCCEEW 2022);
- SPRAT databases for relevant EPBC Act listed species and communities (as of July 2016);
- Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre et al. 2022);
- Approved Survey Standards: Greater Glider *Petauroides volans* (DSE 2011).

Table 2: Survey Methodology Summary

Date	Weather Conditions	Methods
15 May 2023	18.1°C min – 25.8°C max 1.0 mm rainfall recorded	Deployed motion sensing cameras x2
16 May 2023	16.7°C min - 25.5°C max 17.8 mm rainfall recorded	MHQA transects, SAT surveys, Greater Glider Survey and spotlighting for nocturnal arboreal mammals
17 May 2023	13.5°C min - 25.0°C max 0 mm rainfall recorded	MHQA transects, SAT surveys, Greater Glider Survey, diurnal hollow searches and spotlighting for nocturnal arboreal mammals
18 May 2023	12.6°C min - 23.9°C max 0 mm rainfall recorded	Diurnal hollow searches and connectivity assessment, collect motion sensing cameras.

Source: Bureau of Meteorology – Bundaberg Aero (039128) weather station for rainfall and temperature data

2.1.1 Modified Habitat Quality Assessment (MHQA)

In order to determine the quantum and quality of the habitat suitable for MNES within the referral area, vegetation/habitat quality was derived from the Modified Habitat Quality Assessment tool. The vegetation was assessed using a modified version of the Queensland State Governments *"Guide to determining terrestrial habitat quality: A toolkit for assessing land-based offsets under the Queensland Environmental Offsets Policy"* Version 1.2 April 2017. This assessment approach utilises the *Queensland BioCondition Assessment* method combined with site context and species stocking rate assessments to determine the habitat quality of the referral area. The Modified Habitat Quality Assessment (MHQA) methodology was utilised to assess the referral area condition, site context and species stocking rate. Results from these surveys are included in **Section 4** of the **PD**.

2.1.2 Grey-headed Flying-fox Foraging Habitat Assessment

The impact site was assessed using a GHFF Foraging Habitat Assessment (GHFF FHA) tool developed by the Saunders Havill Group. This tool adopts characteristics of the Queensland State Governments *"Guide to determining terrestrial habitat quality: A toolkit for assessing land-based offsets under the Queensland Environmental Offsets Policy"* Version 1.2 April 2017, while also integrating published scientific literature on GHFF foraging habitat. It has been successfully used in multiple EPBC impact and offsets assessments.

The traditional terrestrial habitat quality assessment assesses three (3) core indicators—site condition, site context and species habitat index.

The GHFF FHA tool combines the aspects of the three (3) core indicators and published scientific literature into two (site condition and site context) with site condition being weighted with 64 % and site context weighted at 25 % of the final score. The balance of the weighting (30 %) has been attributed to the third indicator which is independent of the traditional habitat quality assessment, being species stocking rate. The species stocking rate assessment incorporated in the GHFF FHA tool is focussed on 'foraging habitat' for GHFF rather than GHFF stocking rates (presence/absence of the species). This assessment of 'foraging habitat' for species stocking rate has been incorporated in the GHFF FHA tool as GHFF roosting camp or species presence was not observed on-site however, suitable foraging habitat for the species was evident. Therefore, the density of foraging habitat available on-site is considered an appropriate assessment benchmark for species stocking rate. Results from these surveys are included in **Section 4** of the **PD**.

2.1.3 Koala Targeted Searches

Spot Assessment Technique (SAT) surveys were conducted in areas with potential Koala food trees across the site. The aim was to assess Koala usage of the site. Spot Assessment Technique surveys follow the methodology designed by Phillips and Callaghan (2011). It involves a single ecologist combing the ground under Koala food plant trees (or non-food plant trees if necessary) for a 1-metre radius around the trunk searching for scats. Each tree searched must be greater or equal to 100 mm diameter at breast height (DBH) and search of each tree continues for up to 2 minutes. The search can cease prior to the 2-minute limit if scats are detected. A total of three (3) SAT surveys were completed across the site within the survey period (refer **Plan 1**).

2.1.4 Motion Sensor Camera Trap

Camera trapping involves setting up a fixed digital camera to capture images or video of animals that pass in front of a camera with an infrared trigger. It is a non-invasive technique designed to detect medium to large sized animals as they pass, although it is possible to detect smaller animals depending on the set-up. This method identifies fauna activity beyond the scope of direct observational studies and with the absence of potential observer impacts. Two cameras were deployed on 15th May 2023 removed 18th May 2023, for a total of 3 nights (refer **Plan 1**).

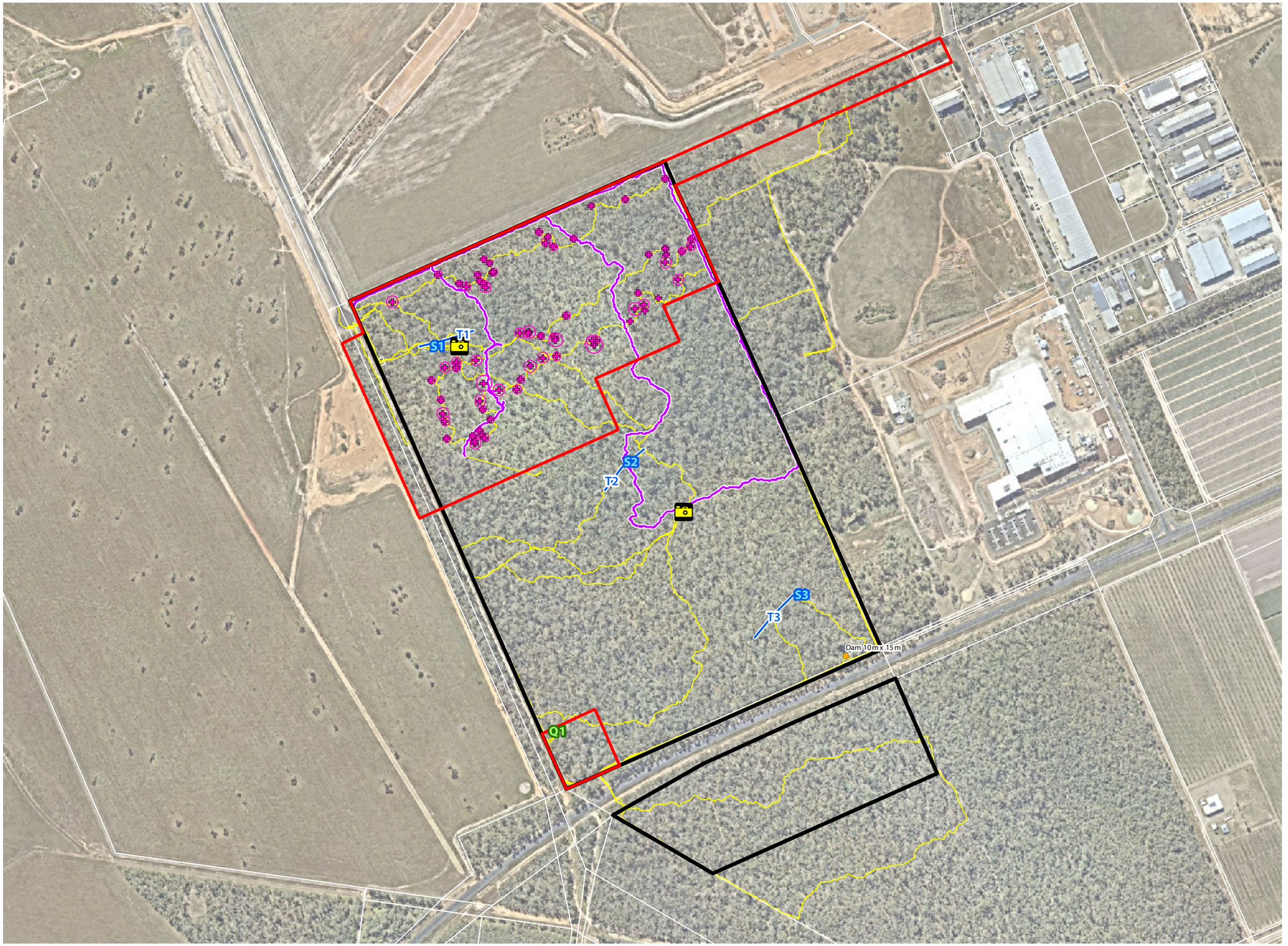
2.1.5 Greater Glider Habitat Suitability and Spotlighting Surveys

Species-specific field surveys for determining habitat suitability and species presence of the Greater Glider were undertaken over a 16-hour period on 16 May 2023 – 17 May 2023 (inclusive). The method implemented was an adaptation from *Terrestrial Vertebrate Fauna Survey Guidelines for Queensland* (2018), while also meeting the survey standards produced by The Department of Sustainability and Environment (Victoria, Australia), *Approved Survey Standards: Greater Glider Petauroides volans* (May 2011) (version 1.0). These surveys are applied prior to logging and are considered adequate to detect presence of the species. The surveys

included identification of large hollow bearing trees and spotlighting transects covering the entire site. No evidence or direct observation of the species was recorded during extensive field surveys.

For spotlighting, the requirement to cover a total distance of as close to 1 km as possible per transect was targeted at a pace of 10 minutes per 100m, as outlined within The Department of Environment, Land, Water and Planning Forest Protection Survey Program *Survey Guideline – Spotlighting and Call Playback* (2020) (version 4.1) and Conservation Regulator Victoria *Guidance Note: Reporting detections of Greater Gliders* (2021). Multiple transects were conducted for each day of surveys to meet the total of 1 km requirement of the guideline. All fauna species observed located in trees during the transects were recorded. This included birds and frogs as well as arboreal mammals. During the spotlighting surveys, hollows were observed with a spotlight and binoculars. The total distance of surveys conducted at the site was 3.4 km across two nights with a survey effort of approximately 270 minutes. Hollow-bearing trees were plotted in the northern extent of the impact area onsite.

1. Field Survey Effort



Notes:
This plan was prepared as a desktop assessment tool. The information on this plan is not suitable for any other purpose. Property dimensions, areas, numbers of lots and contours and other physical features shown have been compiled from existing information and may not have been verified by field survey. These may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions. No reliance should be placed on the information on this plan for detailed design or for any financial dealings involving the land. Saunders Havill Group therefore disclaims any liability for any loss or damage whatsoever or howsoever incurred, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying a development application and which may be subject to alteration beyond the control of the Saunders Havill Group. Unless a development approval states otherwise, this is not an approved plan.

Layer Sources
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Updated data available at
http://qldspatial.information.qld.gov.au/catalogue/
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Legend

- Qld DCDB
- Site DCDB
- Project Disturbance Footprint
- GPS Track Log
- Habitat Quality Transects
- Spotlighting
- SAT Survey Locations
- Quaternary Survey Location
- General Observation
- Hollow-bearing GPS Tree Plot (w/ TPZ)
  * Northern extent only

Issue	Date	Description	Drawn	Checked
A	25/10/2023	Preliminary	TF	KH

0 50 100 150 200 m

Transverse Mercator | GDA 2020 | Zone 56 | 1:6,500 @ A3

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Queensland Government
Queensland Health

Bundaberg Hospital

Address / RPD: Bundaberg Ring Road, Thabeban

25/10/2023 | 11612 E A01 Field Survey Effort A

2.2. Ecological Survey Results

2.2.1 General Site Description

The Referral Area is almost entirely mapped as Category B (remnant) vegetation under the *Vegetation Management Act 1999* (VMA), comprising 60.1 ha of the referral area. The vegetation is described as Least Concern Regional Ecosystem (RE) 12.5.4. The remainder of the site, and a thin strip of vegetation along an easement at the western boundary is mapped as Category X (non-remnant) vegetation (refer **Figure 4** and **Figure 5**). The description for these communities as confirmed on-site include:

- **RE12.5.4** *Eucalyptus latisinensis +/- Corymbia intermedia, C. trachyphloia subsp. trachyphloia, Angophora leiocarpa, Eucalyptus exserta woodland on complex of remnant Tertiary surfaces and Cainozoic and Mesozoic sediments.*
- **Non-remnant** Non-remnant vegetation.

Field survey confirmed the on-ground vegetation is representative of the mapped RE12.5.4 (refer **Photo set 1**). Species composition is reflective of 12.5.4, which includes a canopy dominated by *Eucalyptus latisinensis* (White Mahogany), *Corymbia intermedia* (Pink Bloodwood), *Corymbia trachyphloia* (Brown Bloodwood) along with *Angophora leiocarpa* (Smooth-barked Apple), *Eucalyptus exserta* (QLD Peppermint), and *Eucalyptus tereticornis* (Forest Red Gum). The vegetation contains a sub-canopy and shrub layer dominated by native species such as *Melaleuca quinquenervia* (Broad-leaved Paperbark), *Lophostemon suaveolens* (Swamp Box), *Alphitonia excelsa* (Soap Tree), *Acacia disparrima* (Hickory Wattle) and *Acacia leiocalyx* (Early-flowering Black Wattle).

The ground layer is dominated across majority of the site by exotic *Sporobolus pyramidalis* (Giant Rat's Tail Grass), with native forbs and grasses in some open areas including *Imperata cylindrica* (Blady Grass), *Cymbopogon refractus* (Barbed-wire Grass), *Entolasia stricta* (Wiry Panic), *Dianella caerulea* (Blue Flax-lily) and *Lomandra multiflora* (Many-flowered Matrush). Weed incursion from *Lantana camara* (Lantana) was also present throughout the referral area along with evidence of old fire damage and logging.

A total of seventy-two (72) flora species were recorded within the vegetation communities within the referral area during field surveys, as listed in **Attachment C – Flora and Fauna Species Lists.** Of those, forty-nine (49) are native and twenty-three (23) species are considered to be non-native / introduced species.

A total of forty-three (43) fauna species were recorded during field surveys, including thirty-five (35) birds, one (1) amphibian, six (6) mammals and one (1) reptile. One of these species are identified as marine species under the EPBC Act, *Merops ornatus* (Rainbow Bee-eater), no other EPBC Act nor NCA were directly observed on-site. Despite disturbance and modification from surrounding agricultural land, residential development, roads and highly modified vegetation values, and moderate disturbance levels within the site, the site was observed to contain habitat features for a range of wildlife. These features include arboreal termitaria (with and without hollows), hollow-bearing trees, stick nests, fallen logs and mature vegetation.

One large stick nest, anticipated to be a Wedge-tailed Eagle (*Aquila audax*) nest, was identified within the project impact area. Several smaller stick nests and habitat features were observed throughout the referral area. One invasive species, Cane Toad (*Rhinella marina*), was identified during field survey. In addition, Wild Dog (*Canis sp.*) prints were observed throughout the referral area and calls of the species were heard during night survey works. A complete fauna species list is provided in **Attachment C.**

Photo set 1: General condition of Referral Area during site surveys

The adjoining landscape to the west has been cleared and will be utilised for future residential development, beyond which is the Bundaberg Airport. Cleared land directly adjoins the site to the north which has been earmarked for residential development. A patch of vegetation exists to the east, however this vegetation contains significant weed incursion of *Lantana camara* (Lantana) and is subject to disturbance from development within the adjoining Bundaberg Brewed Drinks Factory. Connectivity to surrounding vegetation is considered to be limited due to the surrounding roads including Bundaberg Ring Road to the south and limited through disturbed vegetation to the north-east. It is noted that the remnant vegetation on site is considered by DCCEEW as potential habitat for the Koala, although it is considered a low likelihood that this species would occur given the moderate disturbance onsite and fragmentation levels to surrounding vegetation, and lack of evidence of their activity following field surveys.

Legend

- Qld DCDB
- Site DCDB
- Project Disturbance Footprint

Regulated Vegetation

- Category A area - *Vegetation Offset/Compliance notices/VDecs*
- Category B area - *Remnant vegetation*
- Category C area - *High value regrowth vegetation*
- Category R area - *Reef regrowth watercourse vegetation*
- Category X area - *Vegetation not regulated under the VMA*
- Water
- Area not categorised

Figure 4

Regulated Vegetation Management Map

File ref. 11612 E Figure A4 RVM A
Date 25/10/2023
Project Bundaberg Hospital

0 50 100 150 200 250 m

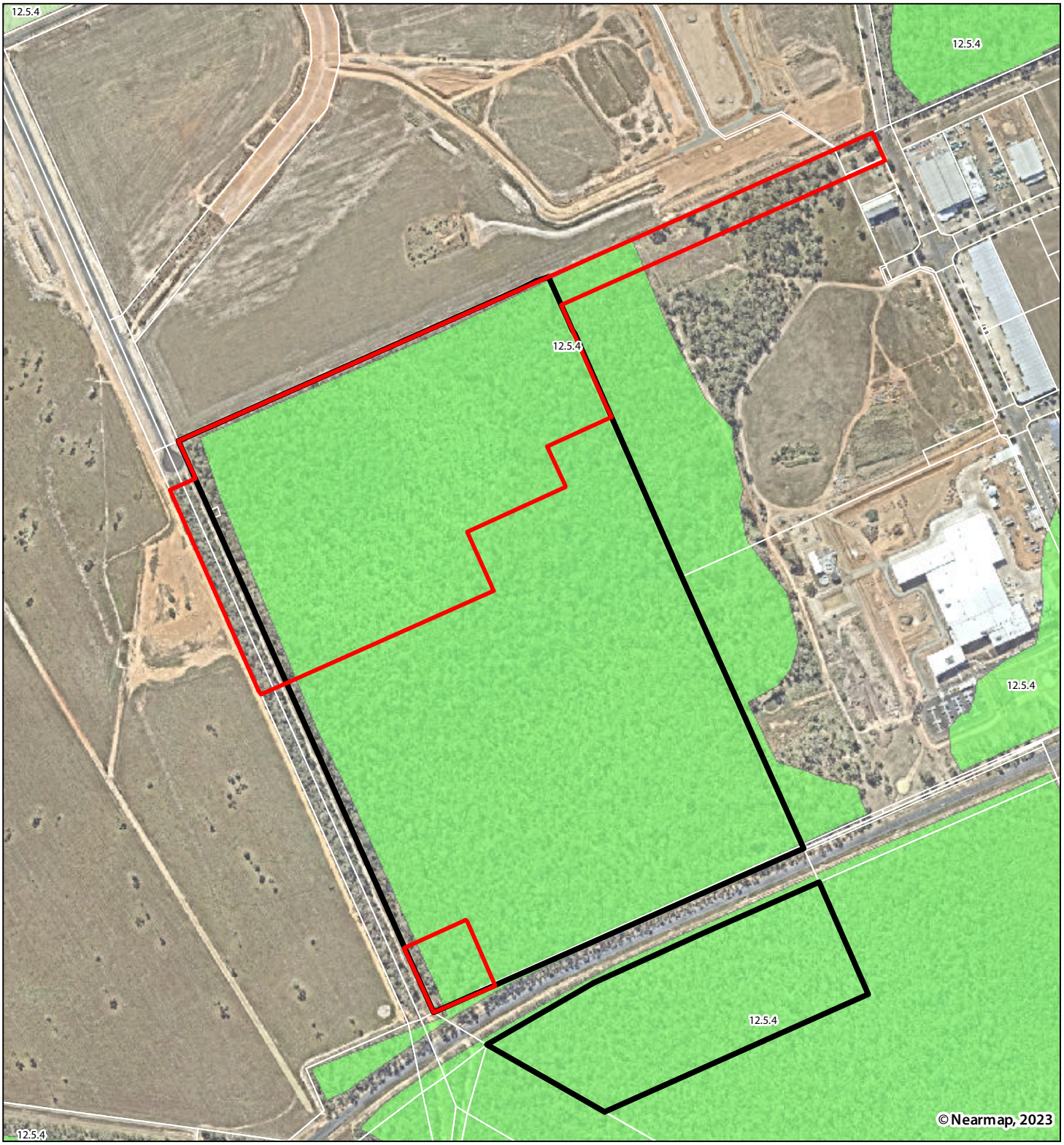
N

Scale (A4): 1:8,000 [GDA 2020 MGA Z56]

Queensland Government
Queensland Health

saunders havill group

Layer Source: © State of Queensland 2023



Legend

- Qld DCDB
- Site DCDB
- Project Disturbance Footprint
- VM Watercourses
- VM Essential Habitat
- VM Wetland

Vegetation Management Regional Ecosystems Map

- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C area containing endangered regional ecosystems
- Category C area containing of concern regional ecosystems
- Category C area that is a least concern regional ecosystem

Figure 5

Vegetation Management Regional Ecosystems Map

Queensland Government
Queensland Health

File ref. 11612 E Figure A5 RVSM A
Date 25/10/2023
Project Bundaberg Hospital

0 50 100 150 200 250 m

N

Scale (A4): 1:8,000 [GDA 2020 MGA Z56]

saunders havill group

Layer Source: © State of Queensland 2023

2.2.2 Threatened Species Habitat

The site contains remnant eucalypt woodland and forest which is suitable habitat for *Phascolarctos cinereus* (Koala) and potential foraging habitat for *Pteropus poliocephalus* (Grey Headed Flying-fox). Across referral area there were habitat features in the form of hollow-bearing trees to provide potential denning habitat for *Petauroides volans* (Greater Glider) along with Eucalypt species to provide foraging resources, however, due to the significant fragmentation and high disturbance of the site this species is considered unlikely to occur. These species were targeted as part of this survey effort (refer **Plan 1 – Field Survey Effort**).

Greater Glider

Potential foraging and denning habitat for the Greater Glider is present within the vegetated areas onsite and adjacent to the project area to the east, south and north-east. Vegetation within the site contains a variety of Eucalypt species including *E. exserta*, *C. trachyphloia* and *A. leiocarpa*. Preferred Greater Glider feed trees *C. intermedia*, *E. latisinensis* and *E. tereticornis* are also present throughout the site (DCCEEW 2022; Eyre *et al.* 2022). The vegetation to the south of the project site consists of similar vegetation and tree species as the subject site, also being mapped at RE12.5.4. However, the site contains some disturbance throughout from historic fire, logging and weed incursion is present in the ground layer which is dominated by *Sporobolus pyramidalis* (Giant Rat's Tail Grass) with patches of *Lantana camara*. These disturbances are considered to limit the habitat quality of the site for Greater Glider.

While the site contains some suitable habitat features for the Greater Glider including hollow-bearing trees and foraging resources, it is not considered to be critical habitat. The site is surrounded by modified habitat, cleared areas and road infrastructure therefore is not considered to be a large contiguous area of Eucalypt forest. The area is considered to be a fragmented habitat patch, and as discussed above, connectivity to larger patches of habitat located in the broader region is restricted due to barriers to movement. In particular, Bundaberg Ring Road to the south, cleared habitat areas to the north and west, and disturbed vegetation through the east and north-east are expected to hinder species movement. Dispersal of the species to enable recolonisation into the subject site is therefore considered to be limited.

Targeted surveys for the Greater Glider were conducted over the survey period from 15 – 18 May 2023. This included habitat assessment, two (2) nights of spotlighting surveys, and identification of significant hollow-bearing trees within the northern impact area. No evidence of Greater Glider was identified within the project area during targeted species surveys.

Koala

The vegetation onsite consists of open Eucalypt woodland containing a variety of known Koala food trees including *C. intermedia, E. latisinensis, C. trachyphloia*, *E. exserta*, *A. leiocarpa*, and *E. tereticornis*. Due to the provision of potential foraging and sheltering resources on-site, the vegetation is considered habitat for the Koala. However, it is noted the vegetation onsite is fragmented from surrounding patches of vegetation as a result of Bundaberg Ring Road to the south, cleared habitat areas to the north and west, and disturbed vegetation through the east and north-east. Given historical clearing surrounding the site and logging with

the site, Koala habitat value is reduced compared to the high-quality habitat values further to the north, south and west.

Initial site surveys undertaken by GreenTape solutions in September 2020 and July 2022 located potential Koala trunk scratches, however, no records of Koala have been noted within the Bundaberg area in the previous 11 years from these surveys. Given that Koala trunk scratches are difficult to identify and are not considered definitive evidence of Koala presence, an additional targeted survey involving the use of Koala scat-detection dogs was undertaken on 31st August – 1st September 2022 to provide further certainty regarding the presence or absence of Koalas within the site. This koala scat-detection dog survey covering a total of 26 km did not detect the presence of Koalas within the site, despite potential scratches.

During the survey period from 15th – 18th May 2023 three (3) SAT surveys to assess Koala activity within the referral area were completed in accordance with Philips and Callaghan (2011) (Refer to **Plan 1** for locations). All SAT surveys scored a 0 out of 30 (refer to **Attachment A9** in the **PD** for full SAT results). No evidence of Koala in the form of direct sightings or scats and scratch marks was detected within the referral area during these targeted surveys nor via incidental searches during tree plot or habitat surveys.

Grey-headed Flying-Fox

The site contains important winter and spring flowering species listed in the GHFF National Recovery Plan including *E. tereticornis* and *M. quinquenervia*. The GHFF has historically occupied forests and woodlands in the coastal lowlands of eastern Australia, having been recorded in the Bundaberg region. As for the Koala, the entire site is potential foraging habitat for the Grey-headed Flying-fox. Available habitat throughout the Bundaberg region is present within eucalypt forests and woodlands, however, the area is fragmented by a patchwork of agricultural and residential land uses. No GHFF were observed as fly-over species at the site and no roosting sites were observed within the site or in the vicinity of the site indicating that the site could potentially be used for opportunistic foraging when the species is mobilising.

Although field surveys did not record the Grey-headed Flying-fox (*Pteropus poliocephalus*) utilising the project site, neither foraging nor roosting, the Department (DCCEEW) considers foraging habitat characteristics for this species are analogous with vegetation characteristics that provide critical habitat for the Koala. The nearest known active roost site is located approximately 5.85 km north (North Bundaberg, Botanic Gardens, Young Street, 585) with individuals recorded in 2019. Additional known flying-fox roost sites are located within 4.5 km north (Bundaberg, Harriet Island/Don Tallon Bridge 293) and over 30 km south of the site (Childers, Mango Hill, 312). Due to the highly mobile nature of the species and the large area of foraging habitat on-site, it is considered likely that the species would opportunistically forage within the referral area.

2.2.3 Existing Threats to MNES

The project site is surrounded by a number of agricultural land uses, which attracts and encourages threats to native wildlife. Several flora and fauna species observed directly or indirectly (scats, prints etc.) on-site are listed under the *Biosecurity Act 2014*, Schedule 2 Part 2 as a *restricted matter – invasive biosecurity*. Several of the identified restricted species form the basis of management requirements due to their direct impact to MNES listed species or indirect impact to the habitat required to support these species.

Field surveys recorded the following restricted matter – Category 3 flora species onsite:

- Lantana (*Lantana camara*)
- Giant Rat's Tail Grass (*Sporobolus pyramidalis*)

Field surveys recorded the presence of a variety of exotic fauna (i.e. pest animals), including species identified as restricted matters under the Queensland *Biosecurity Act 2014*, namely:

- Cane toad (*Rhinella marina*)
- Dog (*Canis familiaris*)
- European Fox (*Vulpes vulpes*)

Wild dogs (*Canis familiaris*) and European Fox (*Vulpes vulpes*) are considered direct threats to the MNES target species specifically Greater Glider and Koala. This conclusion is based on several federal government documents including:

- DCCEEW Conservation Advice for *Petauroides volans* (greater glider (southern and central)),
- DAWE Conservation Advice for *Phascolarctos cinereus* (Koala) combined populations of Queensland, New South Wales and the Australian Capital Territory
- Department of Environment Threat Abatement Plan for Predation by the European Red Fox
- Department of Environment Threat Abatement Plan for Predation by Feral Cats

3. Impact Assessment

Potential impacts to MNES (listed in **Section 1**) that may occur as a result of the project are outlined in this section. These include direct impacts (such as vegetation clearing, vehicle strike) or indirect impacts (such as weeds, increased noise, and lighting). Impacts have the potential to occur in all Project phases being; clearing phase, construction and operation of the Bundaberg Hospital.

3.1. Direct Impacts

The proponent seeks to develop a new hospital facility including hospital buildings, car parks, internal roads and supporting infrastructure. The action includes the installation of drainage swales and a rehabilitated wetland in the eastern portion of the site for stormwater treatment within the retained vegetation. An electrical substation is also proposed in the southwestern portion of the site and is considered priority works to enable the development. The project requires the construction of two new access roads located west and north of the subject site. The hospital development will involve the construction of nine buildings with the development footprint contained in 24.2 ha (refer **Figure 3**). The EPBC Act approval conditions allow for a total clearing area of 24.46 ha, which includes 23.56 ha of MNES habitat that can be cleared. Notably, portions of impact include wetland rehabilitation for stormwater treatment areas, with 41.9 ha of vegetation that will be retained within adjoining habitat set aside for preservation.

As detailed in the previous sections, field surveys confirmed that, with the exception of Koala, Grey-headed Flying -fox and Greater Glider, the following are unlikely to occur or have a low likelihood of occurrence on the referral area:

- EPBC Act listed TECs;
- EPBC Act and NC Act listed flora species;
- EPBC Act and NC Act listed fauna species;
- EPBC Act Migratory fauna species.

A total of 23.3 ha of vegetation will be directly cleared to facilitate the construction of the New Bundaberg Hospital with an additional 0.26 ha of temporary impact from the stormwater management area. Species specific impacts to MNES are provided below:

- Impact of 23.56 ha to ground-truthed Koala habitat.
- Impact to 23.56 ha to potential GHFF foraging habitat.
- Impact to 23.56 ha to potential Greater Glider foraging habitat.
- No impact proposed to other MNES.

3.1.1 Vegetation clearing and habitat loss

Clearing of vegetation to support the development will reduce vegetation cover and habitat for flora and fauna dependent on those ecosystems. The development of the Bundaberg Hospital will involve clearing of

approximately 23.56 ha of habitat identified as critical to the survival of the Koala, Grey-headed Flying-fox and Greater Glider.

Impacts to threatened fauna species as a result of clearing may include:

- Injury or death during vegetation clearing;
- Loss of habitat requiring individuals to mobilise from the area and find new breeding and/ or foraging habitats;
- Fragmentation of habitat within the local area and region.

3.1.2 Vehicle Strike

During construction, a large number of vehicles will be required on the subject site. Direct impact from vehicle movements on threatened species and vegetation communities include:

- Damage or destruction of vegetation or fauna habitat by vehicles traversing these areas; and
- Fauna strike.

Upon completion of the hospital development, there will be a significant increase of vehicle traffic (compared to baseline conditions) and this will increase the likelihood of fauna strike. The probability of fauna strike is reduced due to the fact that most fauna will generally avoid modified areas. Notwithstanding this, a low number of macropods, as well as reptiles (i.e. snakes and lizards attracted to heat on roads) may occasionally enter the area and be at risk of vehicular strike. However, given the lack of evidence of macropods both on-site and on adjoining allotments, the risk of vehicle strike is considered to be negligible. Further, the area is already subject to heavy vehicular traffic due to surrounding land uses.

3.1.3 Predation from Pest Animals

During field surveys, a variety of exotic fauna (i.e. pest animals) were identified including species identified as restricted matters under the *Queensland Biosecurity Act 2014* namely:

- Cane toad (*Rhinella marina*);
- Dog (*Canis familiaris*);
- European fox (*Vulpes* vulpes)

Pest species threaten populations of native wildlife through direct predation (from foxes, cats and dogs). The Greater Glider and Koala suffer from predation to varying degrees and predation is listed as a threat in their respective species EPBC Act Conservation advice. Competition for resources can also impact threatened species. Disturbance from the construction of the hospital has the potential to make it easier for feral animals such as foxes and wild dogs to predate on wildlife. Specifically, if present, Koalas will incur increased susceptibility to predation whilst dispersing from habitat being cleared, or whilst attempting to return to habitat that has been cleared. Pest animals have the potential to impact on MNES threatened fauna species during all Project phases.

3.2. Indirect Impacts

3.2.1 Weeds

Increased vehicle movement during the construction phase has the potential to increase the spread of weeds in the area, particularly during the vegetation clearing phase. Field surveys identified the presence of *Lantana camara* and *Sporobolus pyramidalis* onsite within the project impact area and retained vegetation. Throughout the construction phase and operation of the hospital, vehicle movement may introduce or spread weeds resulting in deterioration or loss of vegetation and important fauna habitat. This may incur indirect impacts to threatened MNES, however with implementation of standard mitigation measures, the project is likely to result in a negligible impact to ecological values due to the potential introduction/spread of weeds.

3.2.2 Noise and vibration

Noise levels greater than existing ambient noise levels are expected during the construction within the project area. Sources of noise are likely to consist of noise in short, intense pulses from mobile plant equipment, and more prolonged noise, with consistent vibration, pitch and volume from generators, excavators, and pumps, in addition from noise from vehicles. This in turn can affect feeding, roosting, breeding, or nesting behaviour of threatened MNES species.

Both steady continuous and single noise events have the potential to lead to ecological impacts. Construction noise is expected to elicit some avoidance response from fauna using the surrounding vegetation though, with consideration of the extent of habitat available in the study area, this is likely to be a temporary and negligible to minor impact.

Noise levels are likely to increase once the hospital development is complete as there will be increased vehicular and pedestrian traffic. Road noise will be the primary source of noise impact. The establishment and use of paths through the hospital site will also provide a source of noise and light due to pedestrian traffic.

3.2.3 Artificial Light

Artificial light can affect both nocturnal and diurnal animals by disrupting behavioural patterns, with quality of light (e.g. wavelength, colour), intensity and duration potentially evoking different faunal responses. Impacts from increased light levels include disorientation from, or attraction toward, artificial sources of light; mortality from collisions with structures; and effects on light-sensitive cycles of species (e.g. breeding and migration for fauna and flowering in plants). An artificial increase in lighting can also affect abundance of predators.

Presence and intensity of artificial light in the project area will temporarily increase during the construction phase; however, night works will not be common. Lighting will be directed to construction areas within the project area. Some light spillage will be inevitable and is likely to be contained. Potential impacts associated with light emissions will be temporary and unlikely to be significant. With implementation of standard mitigation measures, the project is likely to result in a negligible impact to ecological values due to the use of light pollution during construction.

After construction is complete, the operation of the hospital and presence and intensity of artificial light will have most impact at the edges of adjacent vegetation.

3.2.4 Air Quality and Dust

Construction activities have the potential to generate dust emissions. Dust emissions during construction will be temporary. The main sources of dust will be generated via:

- Wheel-generated dust from the haul roads created for the construction phase;
- Dust lift-off from exposed surfaces (e.g. construction roads and pads);
- Earthworks, including construction of the embankments, and moving, dumping and shaping material; and
- Vegetation and soil clearing of the land.

Excessive deposition of dust on leaves of plants can suppress the growth and photosynthesis, resulting in reduced habitat quality for fauna. High levels of airborne dust can irritate the respiratory systems of fauna and potentially result in ingestion of dust-coated seeds and other foods. Excessive deposition of dust on open water bodies may also degrade water quality and overall habitat quality for fauna. With implementation of standard mitigation measures, the project is likely to result in a temporary and minor impact to ecological values due to the generation of dust.

During the operation of the hospital, damage or destruction of vegetation and fauna habitat through smothering by dust generated by vehicles traversing hospital may also occur.

3.2.5 Waste disposal

Inappropriate disposal of non-hazardous wastes can attract vermin and other wildlife to site. This may exacerbate potential impacts (e.g. road mortality). Litter may also enter surrounding environments. With implementation of standard mitigation measures, the project is likely to result in a negligible impact to ecological values due to the generation and handling of waste.

3.2.6 Hazardous and dangerous goods

Spills and leaks from transfers (fuel, chemicals) and inadequate storage of dangerous goods and hazardous wastes could result in point-source contamination of surrounding land. Adverse impacts could include toxic impacts on vegetation (resulting in degradation or loss of vegetation and habitats), toxic impacts on fauna (from contact, inhalation or ingestion) or indirect impacts on threatened and migratory species from habitat loss. Adverse impacts on surface and groundwater quality are also possible.

With the application of standard mitigation and management measures, impacts from liquid and solid waste disposal will be avoided or localised and small in scale. Further to this, the likelihood of significant spillages is considered low. Therefore, the project is likely to result in a negligible impact to ecological values due to potential spills and leaks.

3.2.7 Increased human presence

Increased human activity during construction has the potential to disturb fauna within adjacent habitat areas. Examples of impacts included heightened vigilance and predator avoidance, which can disrupt foraging and roosting efficiency, or deter wildlife from using particular areas. Impacts essentially represent a reduction in core habitat due to edge effects. The project is likely to result in a temporary and minor impact to ecological values due the increased human presence on site during construction.

Furthermore, increased human activity associated with the hospital operation has the potential to disturb fauna that exist within the broader area and fauna which utilise the retained vegetation onsite.

3.3. Summary of Impacts

A summary of the main impacts with potential to occur to MNES as a result of the Project that will be addressed in the mitigation and management measures is provided in **Table 3**.

Table 3: Summary of potential impacts to MNES

Impacts	Potential Impacts to MNES	Impacted MNES	Project Phase
Vegetation clearing and habitat loss.	Removal of vegetation that provides foraging and/or breeding habitat for a threatened species. Injury or death during clearing.	All	Clearance
Vehicle Strike	Vehicles, machinery and site access onsite at increased levels may lead to vehicle strike causing injury or death.	All	All phases (clearance, construction, and operation)
Habitat fragmentation and barriers to fauna movement.	In its current form the site retains limited functional connectivity, however there is potential for a reduction in the ability of MNES to disperse safely through the area.	Koala and Greater Glider	All phases
Increased presence of feral animals – predation and habitat degradation by invasive fauna.	Dogs and foxes have been recorded within the vicinity of the project area and have the potential to increase with disturbance onsite.	Koala and Greater Glider	All phases
Introduction of weed species and pathogens.	Weed dispersal throughout the project area by vehicles, machinery and people leading to habitat degradation.	All	All phases
Noise and vibration	Disturbance of habitat surrounding the hospital from activities within the site, particularly the retained patch of vegetation at the southern extent.	All	All phases

Impacts	Potential Impacts to MNES	Impacted MNES	Project Phase
Air quality and dust	Potential to generate dust emissions from the removal of vegetation and soil during construction and operation. Potential to effect retained patch of vegetation at the southern extent.	All	All phases
Artificial light	Light disturbance at night from construction and hospital operation. Loss of habitat within the retained patch of vegetation at the southern extent due to light disturbance at night.	All	All phases
Erosion and sedimentation	Alterations to local hydrological regimes from erosion and sedimentation.	All	All (predominantly vegetation clearing and construction)

4. Avoidance, Mitigation and Management Measures

A number of management and compensatory measures are proposed to avoid, mitigate and manage direct and indirect impacts on the listed threatened fauna. These include measures specific to a particular project phase, or management measures to be implemented over the life of the project as outlined in **Section 5**. Project design considered a set of hierarchical management principles as outlined in State and Commonwealth offset policies, that are designed to firstly avoid impacts, then mitigate and management impacts to the environmental values.

- Avoidance: Avoiding direct and indirect adverse impacts where possible through Project design;
- Mitigate: Mitigating direct and indirect adverse impacts where impacts cannot be avoided through actions to reduce likelihood or severity of impacts occurring such as modifying design (e.g. employing specialist clearing and construction methods, reducing vehicle speed limits);
- Manage: Implement management actions to prevent or reduce impacts occurring such as weed and feral animal control, fire management. These actions are often over a longer timeframe;
- Remediation and rehabilitation: Actively and progressively remediate and rehabilitate impacted areas to promote and maintain long-term recovery;
- Provide offsets: Queensland Health are delivering environmental offsets for significant, residual impacts to MNES which will be addressed in a separate Offset Strategy.

4.1. SMART Principles

All MNES Management measures have been developed to be consistent with S.M.A.R.T principles which are:

- **S**pecific – what and how.
- **M**easurable – baseline information, number/value and auditable.
- **A**chievable – timeframe, money and personnel.
- **R**elevant – conservation advices, recovery plans and threat abatement plans.
- **T**ime bound – time-bound (specific timeframe to complete).

4.2. MNES Avoidance Assessment

Impacts to MNES have been avoided by focusing the development area on the unconnected portion of the site in the north which adjoins cleared land to the north and east, and the retention and preservation of bushland areas that augment adjoining reserves. The development footprint has been consolidated as much as possible to the northern portion of the site, along the edge of existing tracks and cleared / rural land. The total clearing impact area was reduced from the original footprint as part of the assessment. Additionally, by

consolidating the layout to the north, clearing to establish the bushfire asset protection zone has been reduced and the setback from Bundaberg Ring Road has been substantially increased thereby removing the need for an acoustic fence, which would also require vegetation clearing. Potential remaining impacts will be mitigated by the implementation of fauna friendly design measures.

Furthermore, an area of approximately 41.9 ha of bushland will be retained to the south of the hospital impact site to provide habitat for fauna and identified MNES. Minimal vegetation clearing to support the installation of vegetated swales and a wetland detention basin for stormwater treatment will occur in this area (**Figure 3**). Exclusion zones will be clearly marked with temporary fencing and signage.

4.3. Vegetation Clearing and Construction Phase Mitigation Measures

4.3.1 Environmental Pre-clearance Package

Each clearing phase will be subject to issue of an Environmental Pre-Clearance Checklist and Environmental Pre-Clearance Package to ensure all approval requirements are met prior to vegetation clearing. Environmental Pre-Clearance Checklists are designed to easily show compliance for approval requirements, including EPBC approval requirements, in a format where they can be 'ticked off' prior to vegetation clearing. The purpose of the checklist is to ensure:

- All required approvals are in place prior to clearing and all relevant documentation including approvals, approved plans and management documents are compiled and distributed to all relevant personnel;
- Threatened flora and fauna pre-clearance checks are undertaken of the clearing extent and appropriately documented so that:
    - Any threatened flora in the cleared area is identified and appropriate measures are in place,
    - Any threatened fauna and / or fauna habitat is identified and appropriately managed, and
- Appropriate induction procedures are in place and environmental requirements are understood and complied with by all contractors and sub-contractors.

Environmental Pre-clearance Packages require all approval documentation, including EPBC approval requirements, relevant to that clearing stage to be prepared, compiled, and distributed to all relevant parties prior to the commencement of clearing. The Environmental Coordinator will be responsible for preparation of and the Environmental Pre-clearance Package.

All relevant parties (e.g. civil contractor, clearing contractor, fauna spotter, environmental coordinator, superintendent and client) must sign the checklist prior to clearing, acknowledging that they have reviewed all, and will undertake the works in accordance with, approved procedures and reporting.

As way of acknowledgement, the Environmental Pre-Clearance Checklist will be run through at a project pre-start meeting with all personnel and relevant parties required to sign the checklist. No clearing can commence

for a specific phase of works until the checklist has been completed and signed off by the Environmental Coordinator.

4.3.2 Vegetation Clearing and Fauna Management Plan

An overarching Vegetation Clearing and Fauna Management Plan (VCFMP, refer **Attachment D**) has been prepared and approved to manage and mitigate potential impacts of the construction phase covering the loss of vegetated areas, isolated trees and likely barriers and impediments to local dispersal. Further, separate fauna management measures will be implemented post-development to mitigate potential ongoing impacts to fauna.

Project planning should consider the avoidance of clearing between April and November if possible, to reduce fatalities of juvenile animals and orphaning of fauna during vegetation clearing. As many microbats are expected to occur on site, clearing in autumn would result in the least amount of microbat death. The current project schedule falls outside of this period.

The VCFMP includes details on:

- trees marked for removal;
- all civil works likely to impact existing vegetation;
- temporary and permanent exclusion and protection fencing;
- roles and responsibilities for site contractors, the developer and the consultant group;
- stockpiling and site access locations;
- species surveyed as using the site, focusing on those most likely impacted by development works;
- a list of relevant State and Commonwealth legislation constraints and controls for fauna potentially affected by development works;
- a plan showing existing habitat opportunities and locations;
- details of the threats to existing fauna species;
- a clearing sequence plan showing the commencement of clearing and direction of removal to allow for the appropriate flushing of fauna towards safe havens and/or the application of an appropriate relocation program;
- management and mitigation measures – i.e. temporary use of fauna exclusion fencing and tree protection/exclusion around tree protection zones (TPZ) of vegetation to be retained;
- description of fauna spotter role; and
- specific fauna management procedures for potential or known habitat trees.

A tree felling protocol is provided as part of the VCFMP to guide the removal of hollow-bearing trees where their removal cannot be avoided. This protocol will detail preferred methods of clearing hollow-bearing trees i.e. using a two-stage process, removing surrounding trees one day before habitat trees, and "tapping" trees

to encourage fauna to leave before felling. Trees will be felled using an excavator with grabs or a ripper or a tree harvester able to gently lower trees. Trees will not be felled and left to fall under their own weight as the excavator must be able to control the fall of the tree. No bulldozers will be used for tree clearing on site.

Fauna Management Plan and Protocols

Under Queensland's *Nature Conservation Act 1992*, all native fauna are protected and as such the following activities are required to ensure that vegetation removal and construction does not adversely affect native fauna species:

- Immediately prior to the commencement of clearing of native vegetation, a daily visual inspection of the area must be carried out;
- In the event of an animal being located, an area of 5 metres radius should be established around the tree, excluding machinery from this area until the animal has relocated (usually overnight); or
- If an animal requires relocating, this must be undertaken by a suitable qualified fauna expert (e.g. fauna spotter-catcher) recognised by the Queensland Parks and Wildlife Service.
- Any native fauna orphaned or injured by the development process must be reported to the Queensland Parks and Wildlife Service.
- The site supervisor is responsible for the safe management of site fauna and implementation of these specific fauna requirements.

Fauna management protocols are outlined within the VCFMP for potential impacts of the construction phase covering the loss of vegetated areas, isolated trees and likely barriers and impediments to local dispersal. These measures include:

- Clearing sequence plan from the VCFMP
- Management and mitigation measures i.e. temporary use of fauna exclusion fencing
- Fauna spotter role, contacts and certification
- Specific fauna management procedures for potential or known habitat trees

4.3.3 Fauna Spotter Catcher Roles and Reporting

A **DES** registered Fauna Spotter Catcher must be appointed to ensure fauna management, prior to, during and post clearing. This role is mandated for any clearing of native vegetation in Queensland. The role of the Fauna Spotter Catcher is to complete an assessment of the works area no more than 2 weeks prior to clearing and present a short report to the proponent on the findings and how the proposed clearing is to be managed. The Fauna Spotter Catcher is required at the pre-start meeting and be within the referral area during all times of construction.

A registered and suitability qualified fauna spotter catcher/ecologist will need to be employed for the construction phase of the project to implement a protocol of best management practises. Significant habitat features, should any be identified on site, will be flagged prior to clearing events and these areas supervised by an appropriately experienced Ecologist. Identified within the clearing supervision protocol should be flagging of hollow bearing trees, if present, followed by the removal of vegetation surrounding them. After 24

to 72 hours, these trees should then be removed. Trees must be directionally felled into open or already cleared areas.

The objective of this is to enable hollow dependant fauna an opportunity to move on their own accord as many species utilise multiple den/roost sites within a given home range should they occur. Certain areas could be identified and flagged as significant, such as old-growth trees with hollow resources and on-site identification to construction personnel will help reduce/avoid clearing. Where required, native fauna situated within areas to be cleared will be relocated to a secure area of similar habitat prior to the commencement of vegetation clearance works by a registered fauna spotter/catcher. Should any removal and relocation of nests be required, it is to be undertaken by a suitably qualified and experienced person and advice sought where necessary.

Under the NCA, registered Fauna Spotter Catchers must complete a return of operations report to the Queensland State Government stating all fauna encountered and the specific management measures used to ensure the safety of native animals.

It is the role of the Fauna Spotter Catcher to take all reasonable steps to protect wildlife that may be impacted by vegetation clearing. These steps include the following:

- Undertaking wildlife load reduction measures through the pre-clearing trapping and relocation of wildlife within 1 to 2 weeks prior to the approved clearing being conducted. Sequential clearing cannot be used as a primary fauna management measure.
- Clearly distinguish vegetation found to contain fauna or fauna habitat (e.g. tree hollows, arboreal termite mounds, stick nests or possum drays) with flagging tape, and visually and verbally communicate this information to the tree feller to ensure flagged trees are not felled until authorised by the fauna manager.
- Manage any Koalas identified on-site in accordance with the *Nature Conservation (Koala) Conservation Plan 2017* and *Management Program 2006-2016*.
- Manage any GHFFs identified on-site in accordance with the protocols discussed in the VCFMP.
- Manage any Greater Glider identified on-site in accordance with the protocols discussed in the VCFMP.
- Manage fauna habitat identified during the site inspection using the protocols discussed in the VCFMP.
- Work in conjunction with a professional tree feller in the removal of any vegetation.
- Schedule vegetation clearing to ensure that the impacts on wildlife are minimised and the likelihood of detection and capture of wildlife is maximised and wildlife load reduction measures are productive.
- Ensuring vegetation and rubbish piles are not left to serve as refuge for displaced or roaming wildlife through the implementation of the following measures:
    - Immediately (within 12 hours) remove or destroy such material.

  - Ensure old (>12 hours) piles of felled vegetation are treated as potential wildlife habitat and inspected by a wildlife spotter/catcher prior to removal or destruction.

- Limiting the felling of habitat and hollow bearing trees to the following methods:
  - Segmental removal of tree, with hollow bearing limbs being checked by the Fauna Spotter Catcher and cleared of fauna using a cherry picker or suitable means determined by the Fauna Spotter Catcher.
  - Segmental removal of the tree, with hollow bearing limbs plugged and lowered to the ground for inspection by wildlife spotter.
  - Use of an excavator with vertical grab to lower the main trunk (only after the removal of lateral limbs).
  - A combination of the above methods.

Adoption of aspects of the RSPCA / ESU of WW Draft Code for Fauna Spotting

The project will adopt aspects of the DRAFT Code of Practice for the welfare of animals affected by land-clearing and other habitat impacts (Draft Code) prepared by the Australia Zoo Wildlife Warriors and Voiceless. This Draft Code is not mandatory, however, is advocated by various environmental organisations as the leading practice method for minimising impacts of native wildlife during construction processes.

Aspects of the Draft Code will be adopted to ensure that fair, reasonable and appropriate measures are undertaken to minimise the adverse impacts on wildlife as a result of vegetation clearing. The code provides standards and guidelines for the humane treatment of wild animals affected by land clearing by detailing the general responsibilities of people involved in land clearing and the specific roles of wildlife spotter/catchers. As emphasised within the Draft Code, it will be the responsibility of all relevant parties to:

- Take all reasonable steps necessary to prevent cruelty or suffering to animals;
- Minimise the loss of wildlife caused directly or indirectly by development or land clearing; and
- Conserve, as much as possible, the ecological values of the development site and their surrounding natural environment (Draft Code, p.5)

The following components of the code are to be adopted as the following actions for any clearing works:

Action 1 – Developer to Engage Fauna Spotter Catcher

This action requires that Queensland Health engage a Fauna Spotter Catcher with full registrations and licences provided in accordance with **DES**.

Action 2 – Fauna Spotter to Prepare a Wildlife Protection and Management Plan (WPMP)

The WPMP should include the following information:

- Description of the project with reference to impacts on wildlife or wildlife habitat;

- Pre-development plan of the referral area showing habitat areas, features, corridors, riparian habitats and adjacent areas;
- Results of any fauna surveys including pre-clearance surveys; and
- A wildlife and habitat impact assessment based on the proposed development works.

Action 3 – Prepare a Wildlife and Habitat Impact Mitigation Plan (WHIMP)

Following completion and of the WPMP the Fauna Spotter Catcher should prepare a more specific Wildlife and Habitat Impact Mitigation Plan (WHIMP), which will include details on:

- Measures required to be completed to minimise wildlife and habitat impacts during operational works;
- Wildlife capture and removal plan;
- Contingency plan for wildlife requiring euthanasia, other veterinary procedures or captive care;
- Wildlife storage and housing plan;
- Wildlife release and disposal plan; and
- Post works measures to minimise impacts on wildlife.

Action 4 – Fauna Spotter Catcher Role at Pre-Start Meeting

Prior to the commencement of any construction works, a pre-start meeting is to be held between the project manager, site foreperson, plant operators and Local Government representatives. At the pre-start meeting, the Fauna Spotter Catcher is to outline the clearing process and the requirements listed in the MNES Management Plan, WPMP and WHIMP.

Action 5 – During Construction

The Fauna Spotter Catcher is to be within the referral area during all phases of construction which involve potential impacts on wildlife or habitat. This will enable to the Fauna Spotter Catcher to make any necessary adjustments to cater for any specific issues encountered during the clearing works.

Action 6 – Post Works Reporting (Wildlife Management Report)

During the course of all site works, including the pre-clearance surveys, the Fauna Spotter Catcher is to keep an accurate record of all animals encountered, captured, incidents and disposals. The records should form part of the Wildlife Management Report to be issued under licence requirements to the State Government. The Wildlife Management Report should consist of the following 3 sections:

a) Wildlife Habitat Management Plan – Aspects of the planning, design, construction and ongoing operation of the project in which risks to wildlife have been identified. This plan should also include recommendations and outline the type, frequency and timeframes for monitoring.

b) Wildlife Capture and Disposal Plan – Should contain the following details for each captured animals:
   a. Species
   b. Identification name or number

c. Sex (M, F or unknown)
d. Approximate Age or Age Class (neonate, juvenile, sub-adult, adult)
e. Time and date of capture
f. Method of capture
g. Exact point of capture (GPS coordinates)
h. State of health
i. Incidents associated with capture likely to affect health
j. Veterinary intervention or treatments
k. Time held in captivity
l. Disposal method (euthanasia, translocation, re-release)
m. Date and time of disposal
n. Detailed of disposal (GPS points of release)
o. For released animals, location relative to point of capture

c) Animal Injury and Euthanasia Report – similar details for the Wildlife Capture and Disposal Plan should be included in this report.

4.3.4 Clearing and Construction Protocols

Timing of Clearing and Construction

Clearing and construction will occur between 6am – 6pm to avoid light impacts on MNES during night time. In accordance with the Grey-headed Flying-fox National Recovery Plan, vegetation clearing will be timed to minimise impacts (direct or indirect) during optimum breeding periods (e.g. outside of mating (March-April), and birth (Oct-Nov).

Temporary Fencing

Fauna may utilise stormwater culverts running beneath Bundaberg Ring Road to self-relocate during vegetation clearing to the area of remnant vegetation to the south. Temporary fencing (e.g. sediment fencing or wire mesh fencing) prior to clearing will be installed to assist in funnelling fauna to culverts and to minimise the risk of direct mortality of fauna directly crossing Bundaberg Ring Road. Culverts will be cleared of debris to ensure easy access for fauna.

Temporary construction fencing to exclude fauna will also be installed around the clearing impact area to limit fauna from entering the construction site once vegetation is cleared (**Attachment E – NBH Fencing Approach**).

Vehicle Speeds

Reduced vehicle speeds will be implemented throughout the project area to minimise vehicle disturbances to reduce threats to Koala from vehicle strike as outlined in the Conservation Advice.

Vehicle speeds will be restricted to a maximum of 40 km/hr within construction areas. Speed limit signs to be installed on each road, and in a number of locations. Wildlife signage to be installed at key fauna habitat areas as the main access road into site to identify potential for wildlife to be present and crossing the road.

Sediment and Erosion Control

Site specific erosion and sediment controls will be established in order to control sediment outflow. This includes suitable topsoil stockpiles and temporary drainage, erosion and sediment control structures.

4.3.5 Salvage and Relocation of Significant Habitat Features

Raptor Nest Relocation

It is noted that a large bird of prey nest, believed to be that of a raptor species (Wedge-tailed Eagle (*Aquila audax*)) was identified onsite within the project impact area. GreenTape solutions identified the nest to be that of a Wedge-tailed Eagle (*Aquila audax*) which are particularly sensitive to disturbance during the breeding season. The raptor nest in the northern portion of the site is located within the main development area and therefore will be relocated to a suitable nearby location (e.g. the vegetation patch to the south of Bundaberg Ring Road) to avoid conflict with hospital activities (e.g. helicopter use).

A detailed High-risk Species Management Program (SMP) has been prepared (refer to **Attachment A11** in the **PD Part A**) mitigate impacts to protected wildlife species and to provide further detail regarding the relocation of the raptor nest. This management plan assesses and provides management measures for potential impacts to animal breeding places of species protected under the *Nature Conservation Act 1992* (Qld). An animal breeding places survey will be required as part of the SMP to inform appropriate mitigation measures to minimise injury to protected wildlife, including colonial breeding species known to occur within the site. The SMP outlines the nest relocation site, timing, procedures and requirements for clearing. Approval of high-risk Species Management Program (SMP) by DES shall be required prior to commencement of any vegetation clearing works.

Hollow-bearing Tree Salvaging

Selected identified hollow-bearing trees will be salvaged from the impact site and relocated within the retained vegetation south of the project site to enhance habitat values. Further details on the hollow-bearing tree relocation is provided in **Section 5.4**.

4.4. Operational Phase Mitigation Measures

The following subsections includes details about ongoing mitigation measures to prevent injury MNES should they occur onsite during the operation of the hospital.

4.4.1 Fencing Design and Predator Exclusion

Wild dogs, Feral Cats, and European Fox are considered direct threats to the MNES target species. This conclusion is based on several federal government documents including:

- DCCEEW Conservation Advice for *Petauroides volans* (greater glider (southern and central)),
- DAWE Conservation Advice for *Phascolarctos cinereus* (Koala) combined populations of Queensland, New South Wales and the Australian Capital Territory
- Department of Environment Threat Abatement Plans for Predation by Feral Cats and European Foxes

Specifically, wild dogs and European fox were identified on and within the vicinity of the project site and therefore will be target species for threat reduction. Feral animals including wild dog were identified during site surveys and have the potential to impose negative pressures on the koala, with dogs representing a key mortality threat to koalas (DAWE, 2022). Remains of Greater Gliders have been found in the stomachs of feral cats and the stomachs and scats of foxes. Predation from both these pests are therefore listed as key threats. Presence of foxes and wild dogs is an impact to all targeted MNES, with particular impact of wild dog on Koala, and fox on Greater Glider.

Fauna Climbable Fencing

Fencing design surrounding the hospital site boundary and the hospital itself has been developed to allow MNES fauna, specifically Koala to access the retained bushland while limit the access of feral predators (namely wild dogs and foxes) to reduce threats to MNES. Climbable fauna-friendly fencing will be installed along the eastern, western, and southern site boundary to continue to allow the movement of MNES fauna across the boundary into and out of the retained bushland habitat. This fencing will aim to exclude wild dogs and foxes, while allowing Koala to access the retained bushland (**Attachment E – NBH Fencing Approach**).

Fauna Exclusion Fencing

Fencing along the southern boundary of the hospital site at the interface of the retained bushland area will implement fauna-exclusion fencing to prevent fauna and identified MNES from entering the hospital and becoming stranded. Fauna exclusion fences with keep MNES, specifically Koala, outside of the hospital site, avoid and minimise Koala injuries from vehicles. **Attachment E** outlines the proposed fencing design. No new or replacement fencing will contain barbed wire. Koala poles will be installed every 200m along the fence line.

To discourage Koalas from climbing the fence and entering the hospital, chain wire fencing with a smooth metal or Perspex sheet on top of the fence in the direction that the Koala will attempt to climb is preferred.

4.4.2 Lighting

To minimise light spill into retained habitat, lighting design will incorporate the installation of directional lighting guards. Lighting shall comply with the dark surrounds lighting levels in AS4282-1997 – Control of the obtrusive effects of outdoor lighting. Lighting design shall also consider the design outlined in the National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds.

4.4.3 Road Signage

To improve drive awareness, road design of the east-west road will incorporate installation of wildlife awareness signage within the development area. Speed restrictions will apply on-site for safety and to reduce risk of fauna collision. The project will adopt the *Draft Technical Note Wildlife Signage Guidelines* development by **DTMR** to ensure best practice fauna management is incorporated into the design of wildlife movement solutions (where considered appropriate) or slow down points. Speed restrictions will apply within the hospital site for safety and to reduce risk of fauna collision.

4.4.4 Stormwater Management Plan

To avoid worsening the downstream stormwater drainage collected by the existing Bundaberg Regional Council stormwater system, a detention system is proposed to be constructed as a series of vegetated wetlands for the northern and southern catchments. The wetland follows the natural path of the land and utilise existing draining line. The extent of stormwater management area has been based on minimising the extent of vegetation impact. Where possible the proposed drainage avoids surveyed vegetation and have been designed to utilise open area. The works are expected to include shaping of drainage swales and table drains with battered edges. Drains are proposed to be vegetated and do not contain concrete lining. Drainage channels and wetlands will be re-vegetated and re-stabilised as part of the proposed works with native species providing habitat for wildlife occurring in the area.

The proposed landscaped swales will consist of a vegetation centre invert where stormwater can flow in lieu of a conventional pipe stormwater system and remove sediment and nutrients in the process. Two constructed wetlands are proposed towards the western boundary of the site. The wetlands will be shallow vegetated water bodies that remove pollutants from stormwater via sedimentation, filtration and biological processes. The wetlands will comprise of an inlet zone; a wetland macrophyte zone vegetated with ephemeral, shallow marsh, marsh and deep marsh species; and a high flow bypass channel. Vegetation clearing for the construction of the wetlands will be minimal (approximately 0.41 ha). The wetlands will be constructed and managed in accordance with the site-specific Stormwater Management Plan.

4.5. Summary of Avoidance and Mitigation Measures

A summary of the proposed avoidance and mitigation measures for the Bundaberg Hospital development are outlined in the sections below.

4.5.1 Vegetation Clearing Phase

Table 4: Avoidance and mitigation for vegetation clearing phase

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
Avoidance					
Ensure clearing of native vegetation and/or disturbance to MNES habitat does not occur within the retained habitat except where required.	<u>Clearly mark boundaries for clearing</u> Prior to any works occurring, clearly identify the boundaries for vegetation clearing and disturbance. Exclusion zones will also be clearly marked with temporary fencing, signage, flagging tape and barricades. Clearing areas will be inspected during environmental pre-clearance surveys. Through a pre-start meeting, internal training will occur for all personnel involved in the vegetation clearing phase to ensure they are aware of the approved works areas, the requirements they need to meet, and sensitivity of the area for threatened species. <u>Tree protection / exclusion fencing</u> Prior to the commencement of any vegetation clearing on site, tree protection/exclusion fencing is to be installed around the tree protection zone/s (TPZ) of vegetation to be retained and trees to be removed shall be visibly marked and identified with flagging tape or similar, in accordance with the fencing locations provided in the VMP. No disturbance is to occur outside of the clearing zone or within exclusion zones without appropriate approvals and/or further assessments.	Protecting retained areas from vegetation clearing will ensure habitat for MNES is maintained.	The approved clearing areas.	Prior to any vegetation clearing occurring onsite.	Works are to be contained within the referral area with mitigation measures outlined earlier effectively applied. The development area is cleared. All disturbed areas shall be rehabilitated either progressively or as soon as activities within any construction zone is completed. Any areas within exclusion zones that are immediately adjacent to construction areas and have been subject to disturbance must also be rehabilitated in accordance with the site-specific Rehabilitation Management Plan (refer **Attachment F**).
Mitigation					
Identify potential fauna species utilising the site and locate release sites and significant habitat features.	<u>Pre-clearance surveys</u> Pre-clearance surveys undertaken 2 weeks prior to clearing by a suitably qualified fauna spotter catcher to identify the presence of threatened species in the area including Koalas, Greater Glider and Grey-headed Flying fox. Identification of habitat features, specifically hollow-bearing trees, nests and fallen logs to be salvaged will also occur during this period. Visual inspection where possible of habitat features shall be undertaken shortly before clearing to identify resident fauna species that may require relocation. All trees within the clearing area will be thoroughly searched and all large trees that contain obvious or suspected hollows will be identified. Suitable areas for fauna relocation in adjacent areas will also be determined.	Identifying and relocating threatened fauna onsite prior to clearing is an effective way to reduce the risk of injury or death during vegetation clearing.	Within approved clearing area.	At least 2 weeks prior to clearing commencing.	Preclearance surveys completed and identified fauna relocated from the site prior to clearing. Hollow-bearing trees, logs and nests to be salvaged located prior to clearing.
Injuries or mortality to MNES threatened species are avoided and mitigated during clearing.	<u>Engage Fauna Spotter Catcher</u> The proponent will engage a qualified Fauna Spotter Catcher to participate in all stages of vegetation clearing. The Fauna Spotter Catcher will be	The use of a Fauna Spotter Catcher throughout clearing is an effective tool to:	Within approved clearing area.	Fauna spotter catcher present at all times during clearing.	The use of a fauna spotter catcher is mandated throughout vegetation clearing. Clearing

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
	required to adopt elements of the Draft Code of Practice endorsed by the Australia Zoo Wildlife Warriors and Voiceless (The Draft Code). The role of the Fauna Spotter Catcher is to ensure that no injury or deaths occur to Koalas or other MNES fauna species. The fauna spotter catcher will also complete appropriate post-clearing reporting after vegetation clearing is complete.	1. Identify the types of species within the referral area prior to clearing; and 2. Identify and flag habitat features that require thorough examination before clearing.		Post-clearing report by fauna spotter catcher to be completed at the end of vegetation clearing.	complete with no injury or death to MNES.
	<u>Temporary fencing</u> Temporary fauna friendly fencing will allow fauna to safely disperse into vegetated areas away from vegetation clearing. Fauna may utilise stormwater culverts running beneath Bundaberg Ring Road to self-relocate during vegetation clearing to the area of remnant vegetation to the south. Temporary fencing (e.g. sediment fencing or wire mesh fencing) prior to clearing will be installed to assist in funnelling fauna to culverts and to minimise the risk of direct mortality of fauna directly crossing Bundaberg Ring Road. Culverts will be cleared of debris to ensure easy access for fauna.	Fauna Spotter Catchers have a primary role to ensure no fauna are in vegetation before it is cleared. Given the size of Koalas and their utilisation of tree branches, they can quite easily be observed from the ground. As such, it is extremely unlikely that a Koala will be killed or injured during vegetation clearing, particularly given the onerous and thorough procedures set out The Draft Code.	Fauna friendly fencing surrounding clearing areas.	At all times during clearing.	Temporary fauna fencing is mandated and guided by FMPs and pre-clearance checklists and pre-starts.
Retain habitat features for rehabilitation.	<u>Retention of some hollow-bearing trees</u> Some large tree hollows will be salvaged and relocated within the retained bushland habitat. Further details on nest box and hollow installation is provided in **Section 6**. Some fallen woody debris, large rocks etc. will also be moved to adjacent habitats.	As Greater Gliders are dependent on large, hollow bearing trees for a sheltering/denning resource, relocating potential habitat trees will support denning resources within retained habitat for the species should they occur.	Within approved clearing areas and retained bushland.	Habitat features to be salvaged will be identified during pre-clearance surveys. Movement of salvaged items to occur during clearing phase.	Some hollow-bearing trees salvaged and re-located to retained bushland at southern portion of the site.
Ensure all site personnel are trained and aware of MNES.	<u>Inductions, toolbox talks, pre-starts and targeted training</u> All site personnel shall attend environmental training as part of the referral area induction process prior to entering the work site. As part of this training all personnel will be instructed on their obligations in regard to vehicle movement, vehicle speed limits, and exclusion zones. All personnel will be instructed on their obligations in regard to vegetation clearing protocols and to protect native fauna. Additional controls for Koala and Grey-headed Flying-fox will be presented in a toolbox talk. Site personnel will be inducted on the potential threatened species and sensitive environmental areas occurring within the project area.	Ensuring site personnel are aware of their obligations onsite and the relevant MNES will help to mitigate impacts caused by vehicle movement and vegetation clearing.	Training will occur in the office and on-site during toolbox talks and pre-start meetings.	Inductions required to be completed prior to works commencing on site. Training and education will occur on a regular basis during clearing phase.	All site personnel educated through inductions and pre-start meetings on MNES prior to clearing commencing.

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
Ensure safe handling of MNES during clearing works.	Fauna spotter catcher A suitably qualified fauna spotter catcher will be available during clearing and will direct clearing in a manner that encourages and allows fauna to safely move from the clearing area. Where animals are unable to move out of the area on their own as a result of injury or otherwise, they will be captured and placed in adjacent areas of equivalent habitat. In the event that fauna handling is required, handling will occur in accordance with the Draft Code of Practice endorsed by the Australia Zoo Wildlife Warriors and Voiceless (The Draft Code). Fauna spotter catcher is to check the clearing area for presence of native fauna including threatened species. Where Koalas are present identify the tree they are in, adjacent trees and ensure these are not cleared until the individual has left the area of its own accord. Ensure there are safe exits for native fauna and that clearing is occurring towards habitat that will be retained. Fauna exclusion fencing may be erected to ensure Koalas and other fauna do not move towards high risk areas such as a busy road. Any captured fauna will be released into a pre-approved area. These release areas will be suitable habitat for the species, larger habitat areas that are being retained, with good connectivity. These release areas will have been identified during pre-clearance surveys. Any injured wildlife will be taken to a local vet or wildlife carer for treatment. This will be done in accordance with The Draft Code. There will be at least one fauna spotter catcher present to each machine.	Fauna spotter catcher to be responsible for the safe handling, capture and release of native and threatened fauna.	In areas marked for clearing.	Fauna spotter catcher will be present just prior to and during clearing. The area will be checked prior to any vegetation being cleared and monitored during the clearing phase.	Vegetation cleared and all native and threatened fauna identified safely relocated to areas of retained habitat.
Minimise impacts to MNES from clearing through clearing protocols	Two-stage removal of hollow-bearing trees A tree felling protocol will be provided as part of the Vegetation Management Plan to guide the removal of hollow-bearing trees where their removal cannot be avoided. This protocol will detail preferred methods of clearing hollow-bearing trees i.e. using a two stage process, removing surrounding trees one day before habitat trees, and "tapping" trees to encourage fauna to leave before felling. Trees will be felled using an excavator with grabs or a ripper or a tree harvester able to gently lower trees. Trees will not be felled and left to fall under their own weight as the excavator must be able to control the fall of the tree. No bulldozers will be used for tree clearing on site.	Felling of hollow-bearing trees in a two-stage process will reduce the risk of injury or mortality to native and threatened fauna utilising the hollows for denning.	Within project clearing area.	At all times during vegetation clearing.	All hollow-bearing trees felled using a two-stage removal process.
Avoid and minimise impacts to MNES species from fragmentation during vegetation clearing through sequential clearing and construction protocols.	Sequential clearing Vegetation clearing has the risk of fragmenting habitat areas during the construction phase. To avoid this impact, vegetation will be undertaken sequentially to allow fauna to disperse from construction areas. This aligns with the Koala Conservation Advice and GHFF Recovery Plan which highlights fragmentation as a threat to these species.	Habitat isolation and fragmentation is a primary concern due to its impacts on fauna. Koalas and Grey-headed Flying-foxes are able to disperse through	Within project clearing area.	At all times during clearing and construction.	Sequential clearing conducted to avoid and minimise impacts to MNES species from fragmentation and clearing.

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
	Vegetation will be cleared sequentially. Clearing will be conducted so that fauna are flushed into safe, vegetated areas and it will avoid pushing fauna into fragmented areas. Staged clearing of vegetation will allow for the gradual loss of vegetation, giving fauna time to naturally disperse away from the disturbance. The proposed clearing phases are: Phase 1: Removing understorey vegetation and smaller juvenile trees (under 4 m in height or trunk circumference of less than 30 cm). Phase 2: After 48hrs, clear remaining larger trees and hollow-bearing trees. Trees with hollows will be cleared with two-stage process outlined above. Once on the ground, the tree hollows will be inspected by a fauna spotter catcher to ensure no wildlife remain in the hollow. Clearing procedures that avoid the fragmentation of vegetation will be adopted within the FMPs and informed by the Fauna Spotter Cather WHIMPs. Clearing will be undertaken in a way that flushes fauna into connected areas of habitat and will avoid flushing fauna into fragmented or hostile areas. Specifically: • Fauna are not required to cross roads or move through developed or disturbed areas, such as residential areas of areas that require movement greater than 100m over cleared ground to reach suitable habitat; • Fauna are not left occupying an 'island' of habitat between hostile environments, such as road and cleared areas; • No habitat trees will be isolated and instead dispersal corridors will be left in place that link vegetation with clearing areas to adjacent areas of retained habitat to allow fauna to disperse under their own volition. • Fauna can safely leave the referral area of clearing and relocate to adjacent habitat; • Demarcation fencing will be fauna friendly to ensure fauna are not trapped within the proposed cleared extent; and • Cleared vegetation is to be stockpiled as to not impede fauna movement. Temporary fauna friendly fencing will allow fauna to safely disperse into vegetated areas while clearing. Temporary fauna exclusion fencing will then be erected to prevent fauna dispersing into construction areas.	a variety of environs, including bushland and cleared areas. The direction of clearing of vegetation in accordance with the WHIMP will ensure that clearing does not create fragmented habitat islands that could trap fauna. Rather, procedures will be in place to ensure clearing flushes fauna away from construction areas into surrounding habitat areas that are connected to the wider landscape. Adjoining areas are permanently designated as Conservation, and thus will not be subject to fragmentation in the future. As such. No residual impacts are anticipated. The sequential clearing of vegetation will allow for the gradual loss of vegetation, giving fauna time to naturally disperse away from the disturbance. The use of fauna exclusion fencing around construction areas will ensure fauna do not disperse into unsafe, hostile areas, again minimising the risk of injury of death.			
Minimise disturbance to MNES from clearing activities.	<u>Timing of vegetation clearing</u>	Clearing controls implemented through the VC&MP and FMP are considered to be able to	Within project clearing area.	Clearing to be restricted to daylight hours.	Vegetation clearing to occur during daylight hours and no

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
	The VCFMP will include controls to avoid, minimise and mitigate risk of disturbance to Grey-headed Flying-fox when foraging in habitat during clearing, specifically: • Clearing between 6am – 6pm. • Timing vegetation clearing to minimise impacts (direct or indirect) during optimum breeding periods (e.g. mating (March-April), birth (Oct-Nov) in accordance with the National Recovery Plan. • Monitoring of foraging trees by the Fauna Spotter Catcher and including appropriate clearing controls / management where required to minimise disturbance.	effectively avoid, minimise and mitigate risk of disturbance to Grey-headed Flying-fox foraging regimes during clearing, and allow for adaptive management where required. With appropriate monitoring of observed feed trees by the Fauna Spotter Catcher no residual impacts are expected to occur. Limiting hours of clearing to daylight hours, allows a 12-hour period for safe dispersal.		Clearing occur outside of MNES breeding periods.	clearing to occur between April – November.
Prevention of vehicle strike on MNES.	<u>Reduced vehicle speeds within project site</u> Reduced vehicle speeds will be implemented throughout the project area to minimise vehicle disturbances to minimise threats to Koala from vehicle strike as outlined in the Conservation Advice. Vehicle speeds will be restricted to a maximum of 40 km/hr within construction areas. Speed limit signs to be installed on each road, and in a number of locations. Wildlife signage to be installed at key fauna habitat areas as the main access road into site to identify potential for wildlife to be present and crossing the road.	Construction management and clearing controls implemented are considered to be able to effectively avoid, minimise and mitigate risk of disturbance to Koala activities during clearing and construction, and allow for adaptive management where required. Given Grey-headed Flying-foxes are nocturnal, there is minimal risk of mortality from vehicle collision. Restricted clearing and construction hours (i.e. daylight hours) is considered an effective mitigation measure to minimise this risk.	Within project site.	Signage to be installed prior to clearing commencing and vehicle speeds to be adhered to at all times during construction.	All vehicles to adhere to speed limits within the project area.

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
Prevent the introduction and / or spread of weeds and/or diseases within the project area.	<u>Wash down of vehicles</u> Vehicles coming from a declared or known weed area offsite and are entering the retained bushland will be washed down at an appropriate wash down facility prior to entering the site. Ensure any soil and other materials brought into site are certified as weed free. Personnel are to ensure their clothing and boots do not carry weed seeds. No companion animals (e.g. dogs) will be allowed within construction areas.	Construction activities increase the risk of weeds, pathogens and contamination into the referral area in accordance with the Koala Conservation Advice and GHFF Recovery Plan. To manage these impacts, appropriate controls for weed and pathogen management, disposal and monitoring will occur onsite. Weeds will be actively managed within the construction footprint and disposed of appropriately.	Within the project site and retained bushland.	At all times during vegetation clearing.	Prevention of introducing weeds and pathogens into the project area and retained bushland.
Prevent soil runoff into retained bushland.	<u>Sediment and erosion control methods</u> Effective sediment and erosion control methods will be established during vegetation clearing to ensure that if a rainfall event occurs sediment does not run off the site into the retained bushland to the south. This may include sediment fences to catch runoff from disturbed areas, flow diversion barriers and sandbags to slow runoff.	Sediment fences, flow diversion barriers and sandbags are effective methods to mitigate soil runoff during rain events.	In areas where vegetation clearing is occurring and soil is exposed.	Install sediment and erosion control measures prior to, and during the clearing phase.	Soil runoff into retained bushland is prevented and minimised.
Prevent increase levels of dust.	<u>Proactive and reactive dust control measures</u> Dust control measures will include the use of weather forecasting and real-time measurement of dust levels and meteorological conditions to modify clearing. Speed limits of 40 km/hr to be enforced. Water down dirt tracks if dust plumes are arising.	Proactive and reactive dust control measures are believed to be suitable to ensure dust levels are controlled during clearing.	In areas where vegetation clearing is occurring and soil is exposed.	During clearing phase and all other phases.	Minimise dust levels affecting retained bushland south of the project area.

4.5.2 Construction Phase

Table 5: Avoidance and mitigation for construction phase

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
Avoidance					
Avoid and minimise Koala injury and mortality during construction.	<u>Temporary fauna exclusion fencing</u> Temporary fauna exclusion fencing will be erected to prevent fauna entering into construction areas to avoid and minimise fauna injuries (particularly Koala) from vehicles.	Fauna exclusion fencing will help to prevent MNES fauna entering construction site and becoming injured or stranded within cleared areas.	Fauna exclusion fencing in appropriate locations surrounding construction areas.	At all times during construction.	Koala are prevented from entering the construction site to avoid injury and mortality.

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
Improve Koala connectivity.	<u>Maintain culverts under Bundaberg Ring Road</u> Installation of Koala fauna furniture under Bundaberg Ring Road and maintaining levels of debris within culverts to allow fauna to safely traverse the busy road.	Prevent Koalas from crossing Bundaberg Ring Road by utilising existing culverts.	Within retained bushland area south of the project site and culverts that traverse under Bundaberg Ring Road.	At all times during construction.	Koala injury and mortality is prevented by improving and maintaining connectivity of the retained bushland either side of Bundaberg Ring Road.
Prevent dog attacks to native fauna	<u>No dogs permitted onsite</u> Site personnel will not be permitted to bring domestic dogs into the Project Area.	Avoiding impacts to MNES through minimising introduced threats.	All areas.	During construction.	Risk of dog attack is avoided by preventing site personnel bringing dogs into the project area.
Mitigation					
Prevent vehicle strike on MNES	<u>Reduced vehicle speeds within project site</u> Reduced vehicle speeds will be implemented throughout the project area to minimise vehicle disturbances to minimise threats to Koala from vehicle strike as outlined in the Conservation Advice. Vehicle speeds will be restricted to a maximum of 40 km/hr within construction areas. Speed limit signs to be installed on each road, and in a number of locations. Wildlife signage to be installed at key fauna habitat areas as the main access road into site to identify potential for wildlife to be present and crossing the road.	Construction management controls implemented are considered to be able to effectively avoid, minimise and mitigate risk of disturbance to Koala activities during construction, and allow for adaptive management where required. Given Grey-headed Flying-foxes are nocturnal, there is minimal risk of mortality from vehicle collision. Restricted construction hours (i.e. daylight hours) is considered an effective mitigation measure to minimise this risk.	All internal roads to have reduced speed limits.	Signage to be installed prior to clearing commencing and vehicle speeds to be adhered to at all times during construction.	All vehicles to adhere to speed limits within the project area.
Reduce light spill and noise into adjacent retained bushland habitat	<u>Restricted construction hours</u> Restricted construction hours (e.g. daylight only) will limit disruption from light and noise impacts, as well as allow a 12 hour period for fauna to disperse and forage. Lighting in areas directly adjacent to retained bushland will be reduced where practicable. Lighting will be designed in a manner that limits disruption on landscape character, views and visual amenity and lighting will be directed towards the infrastructure siting rather than dispersed into native vegetation when sites are adjacent to intact habitat. Lighting at night will be minimised during construction.	Limiting hours of construction and clearing to daylight hours only where possible, allows a 12 hour period for safe dispersal and foraging to occur.	In areas where project infrastructure requires lighting, particularly around buildings.	Construction works to occur during daylight hours.	Limited disturbance to MNES fauna and habitat from light and noise into retained bushland.

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
Prevent the introduction and / or spread of weeds and/or diseases within the project area.	<u>Wash down of vehicles</u> All vehicles and machinery to be washed down prior to entering the site. Install wheel wash and rumble grids. A designated bay will be established where vehicles and machinery can be cleaned on site before leaving site. Ensure any soil and other materials brought into site are certified as weed free. Personnel are to ensure their clothing and boots do not carry weed seeds. No companion animals (e.g. dogs) will be allowed within construction areas.	Construction activities increase the risk of weeds, pathogens and contamination into the referral area in accordance with the Koala Conservation Advice and GHFF Recovery Plan. To manage these impacts, appropriate controls for weed and pathogen management, disposal and monitoring will occur onsite. Weeds will be actively managed within the construction footprint and disposed of appropriately.	Within the project site and retained bushland.	At all times during construction.	Prevention of introducing weeds and pathogens into the project area and retained bushland.
Prevent soil runoff into retained bushland.	<u>Sediment and erosion control methods</u> Effective sediment and erosion control methods will be established during vegetation clearing to ensure that if a rainfall event occurs sediment does not run off the site into the retained bushland to the south. This may include sediment fences to catch runoff from disturbed areas, flow diversion barriers and sandbags to slow runoff.	Sediment fences, flow diversion barriers and sandbags are effective methods to mitigate soil runoff during rain events.	In areas where vegetation clearing is occurring and soil is exposed.	Install sediment and erosion control measures prior to, and during the clearing phase.	Soil runoff into retained bushland is prevented and minimised.
Prevent increase levels of dust.	<u>Proactive and reactive dust control measures</u> Dust control measures will include the use of weather forecasting and real-time measurement of dust levels and meteorological conditions to modify clearing. Speed limits of 40 km/hr to be enforced. Water down dirt tracks if dust plumes are arising.	Proactive and reactive dust control measures are believed to be suitable to ensure dust levels are controlled during clearing.	In areas where vegetation clearing is occurring and soil is exposed.	During clearing phase and all other phases.	Minimise dust levels affecting retained bushland south of the project area.
Ensure all site personnel are trained and aware of MNES.	<u>Inductions, toolbox talks, pre-starts and targeted training</u> All site personnel shall attend environmental training as part of the referral area induction process prior to entering the work site. As part of this training all personnel will be instructed on their obligations in regard to vehicle movement and vehicle speed limits. All personnel will be instructed on their obligations in regard to vegetation clearing protocols and to protect native fauna. Additional controls for Koala and Grey-headed Flying-fox will be presented in a toolbox talk. Site personnel will be inducted on the potential threatened species and sensitive environmental areas occurring within the project area.	Ensuring site personnel are aware of their obligations onsite and the relevant MNES will help to mitigate impacts caused by vehicle movement and vegetation clearing.	Training will occur in the office and on-site during toolbox talks and pre-start meetings.	Inductions required to be completed prior to works commencing on site. Training and education will occur on a regular basis during construction phase.	All site personnel educated through inductions and pre-start meetings on MNES prior to construction commencing.
Ensure safe handling of MNES	<u>Engage Fauna Spotter</u> If Koala are encountered within the construction area, workers should engage a fauna spotter catcher to safely capture and relocate the animal.	Ensure safe handling of MNES through a suitably qualified fauna spotter catcher.	All project areas.	During construction.	Any native fauna and MNES fauna found within the construction site are safely captured and relocated.

4.5.3 Operational Phase

Table 6: Mitigation and management for operation phase

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
Mitigation					
Improve and maintain Koala and other fauna connectivity.	<u>Maintain culverts under Bundaberg Ring Road</u> Installation of Koala fauna furniture under Bundaberg Ring Road and maintaining levels of debris within culverts to allow fauna to safely traverse the busy road. <u>Install fauna-friendly fencing</u> Fauna friendly fencing will be installed around the retained bushland habitat to allow fauna access to the habitat south of the hospital site (**Attachment E** for fencing design).	Prevent Koalas from crossing Bundaberg Ring Road by utilising existing culverts. Maintained connectivity to retained vegetation.	Within retained bushland area south of the project site and culverts that traverse under Bundaberg Ring Road. Surrounding the retained bushland.	Maintenance encouraged during operational phase.	Koala injury and mortality is prevented by improving and maintaining connectivity of the retained bushland either side of Bundaberg Ring Road. Fauna are able to freely enter and exit the retained bushland habitat south of the hospital.
Avoid and minimise Koala and other fauna injury and mortality during hospital operation.	<u>Fauna exclusion fencing</u> Fauna exclusion fencing will be installed along the southern boundary of the hospital site at the interface of the retained bushland and the hospital to prevent fauna entering into the hospital and minimise fauna injuries (particularly Koala) from vehicles.	Fauna exclusion fencing will help to prevent MNES fauna entering the hospital and becoming injured or stranded within the hospital grounds	Fauna exclusion fencing along the southern boundary of the hospital site.	At all times during hospital operation.	No Koalas or other fauna are able to traverse into the hospital site to avoid injury and mortality.
Minimise risk to MNES from feral animal attack.	<u>Feral Animal controls</u> Once the finalised fencing arrangement are installed, implement feral animal controls to mitigate the risk of MNES predation.	Feral animal controls will mitigate the risk of predation to MNES.	Vegetation retention area.	At all times during hospital operation.	Risk of predation is minimised.
Prevent vehicle strike on MNES	<u>Reduced vehicle speeds within hospital grounds</u> Reduced vehicle speeds will be implemented within the hospital site to minimise vehicle disturbances to minimise threats to Koala from vehicle strike as outlined in the Conservation Advice. Speed limit signs to be installed on each road, and in a number of locations. Wildlife signage to be installed at key fauna habitat areas as the main access road into site to identify potential for wildlife to be present and crossing the road.	Education of visitors to hospital on the potential for fauna to be present is essential for reducing impacts to MNES.	All internal roads to have reduced speed limits.	Signage to be installed during construction.	All vehicles to adhere to speed limits within the hospital site.
Reduce light spill into adjacent habitat	<u>Installation of directional lighting guards</u> To minimise light spill into retained habitat, lighting design will incorporate the installation of directional lighting guards. Lighting shall comply with the dark surrounds lighting levels in AS4282-1997 – Control of the obtrusive effects of outdoor lighting. Lighting design shall also consider the design outlined in the National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds.	Lighting guards and lighting that complies with AS4282-1997 – Control of the obtrusive effects of outdoor lighting is likely to be effective in limiting disturbance to MNES.	Within hospital where project infrastructure requires lighting.	During operational phase.	Limit the impact of lighting on MNES and retained bushland habitat.
Management					

Performance Criteria	Method	Effectiveness	Where	Timing	Milestone
Maintain habitat for MNES outside of the approved disturbance limits.	Management of retained bushland The retained bushland in the southern portion of the project site will be retained and managed for MNES habitat value. Active management will occur in these areas including rehabilitation, weed management, feral animal management, and fire management. Management will aim to ensure these areas of habitat are retained and continue to support the species and habitat quality is not degraded over time. Further detail on rehabilitation, weed management, feral animal control, and fire management is provided in **Section 5.**	To ensure no reduction in habitat quality within retained bushland as a result of the project, management measures will be implemented.	Within retained bushland habitat.	Post-construction and during the operational phase of the hospital.	Retained bushland habitat south of the project area is maintained for MNES.
Prevent soil and water runoff into retained vegetation	Stormwater management Stormwater will be managed with a stormwater management system involving a series of vegetated wetlands.	To ensure no reduction in habitat quality within retained bushland management measures will be implemented.	Within entire project area.	Post-construction and during the operational phase of the hospital.	Stormwater management is to occur in accordance with the site-specific Stormwater Management Plan.
Prevent uncontrolled fire events	Implement Bushfire Management Plan (BMP) A bushfire management plan has been prepared for the project site which will be implemented to avoid the risks of uncontrolled fire event occurring.	Implementing the control measures outlined in the BMP is likely to be an effective in preventing uncontrolled wildfires that risk damage to MNES habitat	Within retained bushland habitat.	Applicable to all phases of the project.	Reduce the impact of uncontrolled wildfires through implementing the Bushfire Management Plan.

5. Ongoing Management Strategies and Mitigation Measures

5.1. Objectives and Actions

There are five (5) management actions identified as relevant to the site which will benefit the impacted MNES and /or their potential foraging habitat. Excluding actions already occurring or planned to be undertaken, **Table 7** outlines the direct actions proposed within the retained bushland vegetation south of the hospital site. The management actions focus on the enhancement habitat for the impacted protected matters, while also reducing threats. Although there may be overlap between some of the management actions, all management actions are considered to contribute to the improvement of MNES habitat within the retained bushland.

Management actions have been proposed with consideration of the National recovery plan for the Koala *Phascolarctos cinereus* (combined populations of Queensland, New South Wales and the Australian Capital Territory) (DAWE, 2022), National Recovery Plan for the Grey-headed Flying-fox *Pteropus poliocephalus* (DAWE, 2021) and Conservation Advice for *Petauroides volans* (Greater Glider (southern and central)) (DCCEEW, 2022). Additionally, relevant threat abatement plans (for predation by European red fox and cats), site-specific desktop and field assessments and numerous peer-reviewed papers and studies relevant to the threatened species has been utilised to inform the proposed management actions.

Actions to be completed in accordance with this OMP include:

- **Management Action 1:** Weed Reduction and Management (Weeds of National Significance (WONS))
- **Management Action 2:** Rehabilitation and Revegetation
- **Management Action 3:** Hollow-bearing Tree Salvage and Relocation
- **Management Action 4:** Fire Management
- **Management Action 5:** Feral Animal Management

Several proposed management activities relevant to habitat improvement will be undertaken across the entire retained bushland area including weed management and rehabilitation. For instance, general weed management is intended in relation to all rehabilitation areas across the site, but targeted rehabilitation actions will occur within specific rehabilitation zones identified in the Rehabilitation Management Plan as conditioned under the EPBC Act approval.

Table 7: Retained bushland proposed management actions

Management Action	Details	Benefits to MNES Fauna
1. Weed Reduction & Management	Weed management to reduce the extent of weed cover, targeting WONS particularly *Lantana camara* (Lantana) as well as *Sporobolus pyramidalis* (Giant Rat's Tail Grass)	• Reduce Lantana infestations which suppress and inhibit natural regeneration of vegetation on-site to support the growth rates and regeneration of MNES fauna foraging species. • Improve overall habitat quality as Lantana can have significant impacts to habitat quality and biodiversity through outcompeting other plant species, shading and altering nutrient and water balancing.
2. Rehabilitation & Revegetation	Rehabilitation and revegetation planting within the retained bushland area with Greater Glider preferred tree species, Koala feed tree species and GHFF flowering feed trees in accordance with the site-specific Rehabilitation Plan.	• Improve habitat quality by supporting natural regeneration. • Increasing fauna habitat through planting foraging and denning trees. • Providing future potential foraging habitat, roosting and denning trees.
3. Hollow-bearing Tree Salvage and Re-location	Salvaging existing hollow-bearing trees from the impact area and relocating to areas within the retained bushland that lack native hollow-bearing trees and stags. Protect and maintain existing and relocated hollow-bearing trees.	• Provision of denning habitat for Greater Glider individuals, roosting habitat for White-throated Needletail roosting and habitat for a wide range of other species. • Protect significant native hollow-bearing trees within the site from threats including timber harvesting and fire damage to support Greater Glider denning, White-throated Needletail roosting and other fauna habitat opportunities.
4. Fire Management	Develop appropriate fire management strategies which minimise direct mortality during burning, incorporate unburnt refuges, protect large hollow-bearing trees from fire damage and develop suitable prescribed burning frequency	• Protects large hollow-bearing trees, mature trees and remnant vegetation containing trees likely to develop hollows in future from wildfire damage.

Management Action	Details	Benefits to MNES Fauna
	to protect and support MNES identified fauna and its habitat.	• Management of revegetation planting to support growth of fauna preferred tree species. • Instates a suitable prescribed burning frequency to promote unburnt refuges and protects large hollow-bearing trees from fire damage.
5. Feral Animal Management	Develop appropriate feral animal controls to minimise the risk of predation to MNES.	• Implement feral animal and site-wide control • Continue monitoring for feral animal occurrence with reactive control measures implemented

5.2. Management Action 1 – Weed Reduction & Management

5.2.1 Justification and Benefits to MNES

The aim of weed management is to minimize the introduction, establishment and spread of restricted and prohibited pest plants under the *Biosecurity Act 2014* (BS Act) (QLD) and other invasive species that present a threat to vegetation communities and species habitat in the retained bushland vegetation. These include *Lantana camara* (Lantana) and *Sporobolus pyramidalis* (Giant Rat's Tail Grass).

More than 1400 native species are negatively affected by lantana invasion, including many endangered and threatened species according to the Department of Agriculture and Fisheries (2023). Lantana adversely impacts species richness and some soil faunal assemblages through suppressing plant growth from Lantanas aggressive growth form. *Lantana camara* thickets can form a barrier to terrestrial species, including limiting the Koalas ability to access areas containing NJKHTs. Lantana has been observed to create hotter bushfires due to its woody shrub with thin combustible canes, which significantly alters native vegetation communities and pastures (DAF, 2023).

Increased intensity/ frequency of bushfire is listed as a key threatening process under the Conservation Advice for Koala. Although this largely refers to the impacts caused by Climate Change, the presence of Lantana within bushland can significantly increase the extremity of bushfire and thus the impact it has directly on Koala and other listed species habitat; GHFF and Greater Glider rely on Eucalypt bushland for foraging and breeding. As such, the Queensland Governments 'South East Queensland Koala Conservation Strategy 2022 – 2025' lists management of invasive weeds both in Action Area 1: Habitat Protection and Action Area 3: Threat Management (DES, 2020). Impact management of invasive flora, particularly Lantana, a Weed of National Significance (WoNS), is therefore considered a key direct action to addressing threats on Koala and other listed species that share the same habitat requirements.

Lantana camara occurs within the retained bushland south of the hospital site in isolated clusters and thickets within the understory of remnant vegetation. This infers that the potential for these areas to provide optimal habitat to Koala is impacted by weed infestation. The highly invasive and spreading nature of the species, coupled with the in-active management in areas would result in progressive increases particularly as local climatic events align with optimal germination and seeding periods.

Lantana camara is listed as a restricted invasive species under the *Biosecurity Act 2014*. Under the Queensland *Biosecurity Act 2014* it requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control, this is called the General Biosecurity Obligation (GBO). The GBO states that reasonable and practical is dependent on the current land use practices undertaken by the landholder. The GBO is a risk ratings-based approach, where risks are managed appropriately based on their threat to the land use practices.

Presence of WoNs is an impact to all targeted MNES, particularly Koala.

5.2.2 Proposed Management Actions

Baseline surveys will be completed in the first year of Project commencement to determine the percentage of weed infestation across the retained bushland. This data will form the basis for targeted weed management activities across the site. Proposed treatment sites should be examined and desirable trees and regrowth clearly marked with pink flagging tape to help reduce native vegetation prior to any use of mechanical clearing. The following methods will be deployed:

Lantana camara

- Stick rake, grubbing, ploughing or slashing major accessible areas of Lantana where not on a slope greater than 15% or where no existing native values occur.
- Apply broadscale herbicide and spot spray during high germination summer periods (Nov-March). Utilize organic based Lantana targeted herbicides which minimize impacts on native vegetation regenerating within and surrounding Lantana patches. Control methods applied will be guided by methods outlined in the DAF guide to best management practices and as per Biosecurity Queensland recommendations.
- Control methods applied will be guided by methods outlined in the DAFs guide to best management practices and as per Biosecurity Queensland recommendations.

Other Weeds

- Chemical or non-chemical mechanical removal of *Sporobolus pyramidalis* (Giant Rat's Tail Grass).

Weed management actions will occur in areas outlined within the approved Rehabilitation Management Plan. Post major weed removal operations, periodical weed maintenance rotations for removal / suppression of Lantana regeneration will occur, with the same environmental considerations as the wholesale removing of weeds applied. Weed suppression activities will incorporate adaptive management principles into weed management methods to streamline overall management to the most effective control types.

5.2.3 Tasks, Completion Criteria and Timing

The objectives of weed management within the retained bushland area are outlined below:

- Removal and control of all major *Lantana camara* infestations using a variety of mechanical and herbicide methods. *Lantana camara* infestations are to be reduced to below 5% of the retained bushland area. Areas identified as containing higher infestations are to be targeted during weed removal events.
- Ongoing maintenance to ensure that *Lantana camara* extents within the bushland are retained at or below 5% of the total area through weed management actions; and
- Prevent further spread or establishing of new *Lantana camara* outbreaks within the retained bushland.
- Removal and management of *Sporobolus pyramidalis* in accordance with the approved Rehabilitation Management Plan.

These objectives for weed reduction and management will occur in accordance with the methods outlined in the approved Rehabilitation Management Plan with the timing of actions outlined in **Table 8** below.

Table 8: Management Action 1 Timing

Timing	Preliminary Completion Criteria
Year 1	Complete detailed baseline / weed extent survey utilising an antenna-based GPS system to map the full extent of all *Lantana camara* areas within the retained bushland. Results of baseline weed extent surveys to be included in the year 1 annual report.
Year 2 – 5	Commence detailed weed management control activities within the retained bushland. Methods deployed are to be based on extent of infestation, existing native vegetation values, topography and sensitive receiving environments. The following methods are to be deployed: o Stick rake, grubbing, ploughing or slashing major accessible areas of Lantana where not on a slope greater than 15% or where no existing native values occur; and o Apply broadscale herbicide and spot spray during high germination summer periods (Nov-March). Utilize organic based Lantana targeted herbicides which minimize impacts on native vegetation regenerating within and surrounding Lantana patches. o Target additional weed species onsite in accordance with the approved Rehabilitation Management Plan.

Timing	Preliminary Completion Criteria
Year 2 – 5	Demonstrate a downward trend in the weed extent, vigour and health annually through years 2-5, achieving a significant reduction in *Lantana spp.* extent within the retained bushland by year 5, with less than 10% of the retained bushland containing weed infestations. Actions and downward trend to be reported annually in the relevant annual report.
Year 5	Replicate detailed weed survey through retained bushland. Include plans and calculations in Year 5 annual report demonstrating less than 25% of the retained bushland to contain weed infestations.
Year 6 – 10	Continue to implement detailed weed management control methods in accordance with any recommended adaptive management changes. Demonstrate a downward trend in the weed extent, vigour and health annually through years 6-10, achieving a further reduction in *Lantana spp.* extent within the retained bushland by year 10, with less than 5% of the area to contain weed infestation. Actions and downward trend to be reported annually in the relevant annual report.
Year 10	Remobilize and replicate detailed weed extent survey along with proposed amendments to the targeted pest management activities. Demonstrate less than 5% of the retained bushland area to contain weed infestation.
Year 11 Onwards	Continue to implement detailed weed management control methods in accordance with any recommended adaptive management changes to maintain *Lantana camara* weed infestations to 5% or below within the retained bushland area.

5.2.4 Monitoring

Baseline Lantana surveys within the retained bushland will be completed to provide an actual mapped extent of infestations and occurrences to be used as the benchmark for measuring improvement. Survey methods and results are to be replicated. Year 2 to 5 weed management are to demonstrate a downward trend in weed extent and outbreak to less than 25% of the bushland area. Replicate baseline surveys in year 5 to demonstrate less than 10% of the retained bushland area to contain weed infestations.

Replication of baseline surveys in year 10 to demonstrate a downward trend in the weed extent, vigour and health annually through years 6-10, achieving further reduction in *Lantana camara* within the retained bushland by year 10 with less than 5% of the area to contain weed infestation. Continue weed management actions after Year 10 to maintain weed infestations below 5%.

5.3. Management Action 2 – Rehabilitation & Revegetation

5.3.1 Justification and Benefits to MNES

According to the relative statutory documents (i.e., conservation advice and national recovery plans), all 3 of the targeted MNES species referred to in this MNES Management Plan are significantly impacted by habitat clearing and fragmentation.

Overall, the retained bushland area is in good condition representing remnant vegetation; however, it does contain a variety of weed species, particularly along patch edges (including species listed as Restricted (Category 3) matter under the *Qld Biosecurity Act 2014*). Ecological benefit can be derived through restoration of retained vegetation particularly within the understorey e.g. weed management and natural regeneration to reduce weed cover within priority areas, which has benefits for wildlife movement. Appropriate steps need to be undertaken to manage infestations of these species, particularly within areas subject to disturbance during construction. Habitat degradation will be minimised by undertaking weed management during construction and managing waste and water quality.

The remnant and regrowth vegetation areas on-site provide foraging and habitat values in their current state, however, are observed to contain significant infestation of weeds (namely *Lantana camara*), therefore regeneration of native species for foraging is limited and safe fauna movement impacted. The rehabilitation of these areas will allow for the regeneration of native seedbank, increase habitat for the Koala, Greater Glider, and Grey-headed Flying-fox and improve safe movement opportunities for fauna. Rehabilitation activity on-site will contribute to functional ecological habitat and corridors due to the surrounding landscape containing potential habitat for MNES species.

Koala

The Koala has a specialist diet, feeding on the leaves of select species of *Eucalyptus, Lophostemon, Corymbia, Angophora* and occasionally *Melaleuca* and *Leptospermum*. Consequently, koalas are reliant on access to stands of forest and woodland that support those key food-tree species.

Habitat protection and habitat restoration are Action Areas 1 and 2 respectively within the South East Queensland Koala Conservation Strategy 2020 – 2025. Rehabilitation is therefore a key action that will improve koala habitat values within the retained bushland. Specifically, improving the natural RE community onsite has the potential to increase habitat connectivity and increase the availability of key resources including food and shelter trees for the koala.

Grey-headed Flying-Fox

Grey-headed Flying-fox requires foraging resources and roosting sites to persist. The species is known to feed primarily on the nectar and pollen in eucalypt flowers and fleshy subtropical rainforest fruits, and around 100 species of plant have been recorded in their diet.

Under the National Recovery Plan for GHFF, recovery objective 1 lists enhancing and rehabilitating native vegetation on public and private lands as a way to increase foraging habitat critical to the species survival. Rehabilitation is therefore a key action that will improve GHFF foraging values within the retained bushland.

Greater Glider

The Greater Glider subsists almost entirely on the young leaves and flower buds of select eucalypt species, especially including *Corymbia citriodora* (Spotted Gum), *Eucalyptus tereticornis* (Forest Red Gum), *E. acmenoides* (White Mahogany) and *C. intermedia* (Pink Bloodwood) (Eyre 2006; Eyre et al. 2022).

Under the Conservation Advice for Greater Glider restoring habitat and connectivity is listed as a conservation and management priority, particularly where habitat has been substantially fragmented, disturbed or modified. While connectivity to the site is limited for the species, improving the remnant areas on-site will improve habitat for this species to move into should it occur.

5.3.2 Proposed Management Actions

Objectives of this management action will be to ensure that native remnant vegetation contained within the retained bushland are enhanced and preserved over the life of the project managing and maintaining a ground layer, understory and canopy that is consistent with the nominated regional ecosystem classifications. The rehabilitation program will be undertaken by suitably qualified personnel and will include measures to ensure the maintenance and survival of new breeding and foraging trees within the retained bushland.

MNES habitat assisted rehabilitation will occur through conditional improvement of habitat which primarily centers around weed removal (namely, Lantana), revegetation of areas within the wetland stormwater management areas and rehabilitation where required due to disturbances from vegetation clearing and construction. To achieve the scheduled improvements in the condition and health of the vegetation, two of the four restoration approaches outlined in the South-East Queensland Ecological Restoration Framework – Guideline will be used, being:

- Natural regeneration;
- Assisted natural regeneration;
- Reconstruction; and
- Fabrication.

Restoration is a high cost and high labor-intensive task from preparation to commencement through to the first 5 years of establishment. Only planning and preparation works are proposed within year 1 of the project while beginning communication with a local nursery for stock will be conducted. However, all rehabilitation plantings are to be completed by the end of Year 5. This staged process of rehabilitation is recommended under the *SEQ Restoration Framework Manual* (Chenoweth EPLA, 2012) and SER Australasia *National Restoration Standards* (SERA, 2017). Under these guidelines it is suggested that larger sites be broken into a number of different management zones with progress occurring at different stages within each zone.

Therefore, allowing for each zone to get the same amount of care and management practices. As these zones move to maintenance and the time required for each zone is reduced these can be consolidated.

Rehabilitation actions will be undertaken in accordance with the site-specific approved Rehabilitation Management Plan (RMP). The RMP outlines five (5) management zones within the retained bushland vegetation which are outlined in **Table 9**.

Table 9: Management zone rehabilitation actions for the retained bushland area.

Management Zone	Total Area	Plant Density	Rehabilitation Actions
Management Zone 1 – Existing Vegetation (Natural Regeneration)	300, 500 m^2	Vegetation Allowance for minor disturbances – 15,000 m^2	• Existing native trees, shrubs and groundcovers to be protected and retained. • Weed management to entire zone to encourage natural regeneration by reducing competition. • Appropriate (sensitive) weed management methodology within this zone to minimize any native vegetation damage / losses. • Revegetation using tubestock installation including a diversity of tree, shrub and groundcover species to match regional ecosystem mapping for the site where minor disturbances occur.
Management Zone 2 – General Revegetation / Rehabilitation (Reconstruction)	3,510 m^2	1 plant min per m^2	• Weed management to entire zone to encourage natural regeneration by reducing competition. • Any existing/ occurring regrowth of native trees, shrubs and groundcovers to be protected and retained. • All bare / denuded areas to be appropriately cultivated, topsoiled and blanket mulched (100mm depth) or
Management Zone 3 – Swale Rehabilitation (Reconstruction)	10,620 m^2	3 plants min per m^2	

Management Zone	Total Area	Plant Density	Rehabilitation Actions
Management Zone 4 – Detention Revegetation (Reconstruction)	8,810 m^2	3 plants min per m^2	tecmatting (1:3 batters and locations prone to erosion) as required. All jutenetting to be installed to manufacturer's recommendations. • Reconstruction of natural environment to be undertaken via tubestock installation including a diversity of tree, shrub and groundcover species to match regional ecosystem mapping for site.
Management Zone 5 – Basin / Wetland Revegetation (Reconstruction)	1,585 m^2	8 plants min per m^2	

Benchmarks for rehabilitation efforts are derived from the definition of remnant vegetation under the *Vegetation Management Act 1999*. Vegetation can be mapped as remnant vegetation and associated essential habitat for Koalas if the canopy is 70% if the height, 50% of the cover and similar species composition of the appropriate pre-clearing RE (Queensland Government 2015). Therefore, the final benchmark at 20 years for rehabilitation is 70% of the reference benchmark cover (for canopy, shrub and ground-layer) and 50% of the reference benchmark height (for canopy and shrub layer) of the appropriate RE.

On-site regional ecosystem vegetation communities show the retained bushland contains the following regional ecosystem type:

12.5.4 – *Eucalyptus latisinensis +/- Corymbia intermedia, C. trachyphloia subsp. trachyphloia, Angophora leiocarpa, Eucalyptus exserta woodland on complex of remnant Tertiary surfaces and Cainozoic and Mesozoic sediments.*

Under the Queensland Herbarium biocondition benchmarks for this regional ecosystem indicate remnant canopy tree height as 17 m and subcanopy 8 m, whilst the remnant tree canopy coverage is 37%, sub-canopy coverage 14% and shrub canopy coverage 19%. Therefore, once the AU1 revegetation reaches 70% of these prescribed heights and 50% of these prescribed canopy coverages it can be considered remnant.

The rehabilitation planting will reflect the mapped regional ecosystem on-site RE 12.5.4 via incorporating the following species into revegetation:

- *Angophora leiocarpa* (Smooth-barked Apple)
- *Eucalyptus crebra* (Narrow-leaved Ironbark)
- *Eucalyptus exserta* (Queensland Peppermint)
- *Corymbia intermedia* (Pink Bloodwood)
- *Corymbia trachyphloia* (Brown Bloodwood)
- *Eucalyptus latisinensis* (White Mahogony)

- *Eucalyptus tereticornis* (Forest Red Gum)
- *Lophostemon confertus* (Brush Box)
- *Lophostemon suaveolens* (Swamp Box)

5.3.3 Tasks, Completion Criteria and Timing

The main objective of rehabilitation and revegetation within the retained bushland area is to:

- Encourage natural regeneration through weed management.
- Cover bear areas with topsoil and mulch or tecmatting where required.
- Reconstruct natural environment where required via tubestock installation including a diversity of tree, shrub and groundcover species to match regional ecosystem mapping for site.

The timing of the proposed rehabilitation measures is outlined below in **Table 10**.

Table 10: Management Action 2 Timing

Timing	Preliminary Completion Criteria
Year 1	Establish photo point monitoring and protocols.
Year 1 – 5	Complete treatment within the retained bushland as per the detailed Rehabilitation Management Plan. Monitor and maintain the treated rehabilitation management areas on a bi-monthly basis. Report in each relevant annual report the extent of rehabilitation management undertaken within the treatment zones.
Year 6 – 10	Monitor and maintain the treated rehabilitation management areas. Report in each relevant annual report the extent of rehabilitation management undertaken within the stratified treatment zones.
Year 10	Report on results/progress of rehabilitation within the Year 10 annual report including a detailed review of the effectiveness of restoration procedures applied and adaptive management changes for future implementation.

5.3.4 Monitoring

Implement site rehabilitation in accordance with the site-specific Rehabilitation Management Plan. Complete replicated transect surveys in accordance with the Modified Habitat Quality Assessment methodology (Koala) and Grey-headed Flying-fox Foraging Habitat Assessment methodology. Evidence through photo point monitoring of assisted habitat rehabilitation containing NJKHTs and MNES foraging trees. Plan of completed MNES habitat assisted rehabilitation extents in annual reporting.

Reporting on MNES habitat restoration activities will occur within each 12 month annual report with major surveys results and adaptive management changes documented at Year 5, 10, & 15.

5.4. Management Action 3 – Hollow-bearing Tree Salvage and Relocation

5.4.1 Justification and Benefits to MNES

Selected trees will be salvaged from the impact site and reused as fauna habitat to enhance retained vegetation habitat values. Salvage and re-location of natural hollows to areas of retained vegetation will be used to compensate for the unavoidable loss off tree-hollows that are confirmed or considered likely to provide breeding habitat within the impact area.

Furthermore, the improvement of the remnant retained vegetation via weed management and rehabilitation will ultimately restore the habitat value of this area which already contains suitable large trees (> 300 mm DBH) and hollow-bearing trees likely to support gliders. Trees with a DBH of 300 mm or above are indicators of potential foraging and dispersal trees for Greater Glider (Eyre et al. 2015). Rehabilitation efforts on-site will contribute to long-term protected habitat for threatened species. Therefore, rehabilitation of remnant vegetation will contribute as foraging, denning and dispersal areas for MNES species.

Greater Glider

Under the Conservation Advice for Greater Glider restoring habitat and connectivity is listed as a conservation and management priority which includes measures to reduce the loss of hollow-bearing trees. Hollow-bearing trees are a critical denning resource relied upon by the Greater Glider. The Conservation Advice outlines artificial hollows may be used to supplement the loss of hollow-bearing trees where hollows are limiting. Furthermore, protecting hollow-bearing trees on private property, and incorporating measures to ensure ongoing recruitment of hollow-bearing trees are listed as potential management actions in the Conservation Advice.

5.4.2 Proposed Management Actions

The salvage and reinstallation of hollows and habitat features is to be undertaken by / or under the supervision and direction of a suitably qualified fauna spotter-catcher or arborist, and in accordance with relevant guidelines. Salvaged hollows will include hollows suitable for a range of species including Greater Glider, Common Brush-tail possum, Sugar Glider and Bats. Salvaged hollows shall be installed within retained adjacent vegetation and within vegetation on the southern side of Bundaberg Ring Road in areas identified as suitable by a qualified fauna spotter-catcher.

Salvage from clearing area:

- Hollows should only be salvaged in circumstances where clearing of habitat cannot be avoided.
- Habitat or hollow-bearing trees are to be felled last and cleared using special plant and equipment aimed at reducing the risk of death or injury to occupying fauna.
- Donor habitat tree particulars to be documented by the suitably qualified fauna spotter-catcher prior to salvage – including but not limited to tree species, height and diameter at breast height (DBH), height above ground and aspect of hollow, any other significant features.
- Hollow / habitat feature sections from each identified habitat tree to be carefully removed by, or under direction and supervision of a suitably qualified fauna spotter-catcher.

Reinstallation at receiving area:

- Hollows are to be salvaged and reinstalled within the retained vegetation onsite.
- The salvaged hollow is to be reinstalled in a similar tree specimen, and at a similar height and aspect as the donor tree where it is practical and safe to do so.
- As a general rule, salvaged hollows should be positioned:
    - In a tree species preferred by the target fauna species.
    - At a location in the receiving tree to meet the target species requirements.
    - High enough in the receiving tree to reduce the chances of predation by introduced fauna species, out of reach of humans. Greater than 4 metres above ground level is recommended to minimise predation.
    - Away from potential edge effects to further mitigate feral uptake.
    - Where they can be easily inspected / maintained.
    - Away from bright lights.
    - In a direction that is protected from severe storms and/or prevailing winds. A north-east to south-east aspect is preferred by many species.
    - In a location that is shaded during the hottest parts of the day.
    - Where they are least vulnerable to branch fall.
    - Level with a tree branch to provide easy access for fauna.
    - Firmly mounted with least impact to the tree.
- If not practical or safe to install a tree hollow / habitat feature in a tree at the receiving area, it should be positioned on ground providing there are no conflicts with bushfire requirements at the receiving area.

5.4.3 Tasks, Completion Criteria and Timing

The main objective of hollow-bearing tree salvage and relocation within the retained bushland area is to:

- Identify and salvage natural hollows from the impact area prior to clearing.
- Relocate and establish salvaged hollows within the retained bushland.
- Maintain existing hollows within the retained bushland.

The timing of the proposed hollow-bearing tree relocation is outlined below in **Table 11**.

Table 11: Management Action 3 Timing

Timing	Preliminary Completion Criteria
Vegetation Clearing Phase	Identify suitable habitat trees and hollow-bearing trees for relocation prior to vegetation clearing. Identify reinstallation tree and location within the retained bushland vegetation. Conduct clearing and hollow relocation in accordance with VCFMP.

Timing	Preliminary Completion Criteria
Year 1 – 5	Monitor the success of hollow relocation including: • Condition of the re-located hollow • Utilisation by fauna • Tree health
Year 6 – 20	Maintain hollow-bearing trees within the retained vegetation.

5.4.4 Monitoring

Once the natural hollows have been salvaged and reinstalled within the retained vegetation, within the first five (5) years, annual audit occupancy of the installed nest boxes shall occur. Inspections will identify the following:

- Fauna use including target and/or non-target species.
- Rectification procedures for introduced species. N.B. native predators should not be removed from boxes unless they are endangering a threatened fauna species.
- Any damage or dieback, or risk to the next box.
- Maintenance required.

Following each inspection, a report is to be issued within 21 days by the consulting ecologist and issued to the Proponent and Environmental Coordinator. This report will detail the results of the inspection and outline any further measures to improve beneficial outcomes of the strategy for fauna (i.e. eradication of pest species, minor repairs or replacement).

5.5. Management Action 4 – Fire management

5.5.1 Justification and Benefits to MNES

The project site is mapped as having medium potential bushfire hazard as identified within the site-specific Bushfire Management Plan. The last recorded bushfire within the project area occurred in July 2023. The bushfire was contained by Queensland Fire and Emergency Services (QFES) with no recorded damage to people or property and some boundary fire trails implemented.

The bushland south of the impact site which is proposed to be retained contains Eucalypt woodland and a system of boundary line firebreaks and access tracks. Bushfire management onsite will occur in accordance with the Bushfire Management Plan. This will be achieved through hazard reduction practices and emergency mitigation measures for any buildings bordering potentially bushfire-susceptible vegetation. These practices and measures include fuel reduction and management, road infrastructure to provide safe access and egress, appropriate building design and construction standards, procedures for fighting bushfires and fire intensity reduction management measures.

Habitat loss from bushfires and increased intensity / frequency of bushfire are listed as key threats to the three MNES; Koala, Greater Glider and Grey-headed Flying-fox as outlined within the relevant Conservation Advice and National Recovery Plans. Extensive severe bushfires leading to habitat loss, disturbance and modification has implications for these three MNES and inappropriate fire regimes is an impact to all targeted MNES.

5.5.2 Proposed Management Actions

Fire management will occur in accordance with the site-specific Bushfire Management Plan. This plan outlines the following:

- Agencies / persons responsible for fire management.
- Owner / occupier responsibilities.
- Reporting and auditing.
- Siting of buildings.
- Access roads.
- Electrical supply.
- Water supply.
- Climate change and fire weather projections.
- Emergency response procedures.

5.5.3 Tasks, Completion Criteria and Timing

The main objective of fire management within the site is to:

- Protect infrastructure and environmental values from damage as a result of severe bushfire.
- Undertake fire management activities in accordance with the site-specific Bushfire Management Plan.

The timing of the proposed fire management is outlined below in **Table 12**.

Table 12: Management Action 4 Timing

Timing	Preliminary Completion Criteria
Project duration	Implement site-specific Bushfire Management Plan. Incorporate corrective actions where required.

5.6. Management Action 5 – Feral Animal Management

5.6.1 Justification and Benefits to MNES

A core role of Management Action 5 will be for the prolonged control and reduction in identified primary pest species know to be a direct threat to listed MNES, namely feral dogs, foxes and feral cats, over the vegetation retention area. Secondary pest species, which have indirect impacts on the ecosystems that support the five target MNES species, should be eradicated if present once fencing is installed in order to reduce their impact to rehabilitation efforts. This includes feral pig and deer which are known to damage native vegetation, spread weed seeds and foul water.

Wild dogs, Feral Cats, and European Fox are considered direct threats to the MNES target species. This conclusion is based on several federal government documents including:

- DCCEEW Conservation Advice for *Petauroides volans* (greater glider (southern and central)),
- DAWE Conservation Advice for *Phascolarctos cinereus* (Koala) combined populations of Queensland, New South Wales and the Australian Capital Territory
- Department of Environment Threat Abatement Plans for Predation by Feral Cats and European Foxes.

Wild dogs and European fox were identified on and within the vicinity of the project site and therefore will be target species for threat reduction. Feral animals including wild dog were identified during site surveys and have the potential to impose negative pressures on the Koala, with dogs representing a key mortality threat (DAWE, 2022). Remains of Greater Gliders have been found in the stomachs of feral cats and the stomachs and scats of foxes. Predation from both these pests are therefore listed as key threats. Presence of foxes and wild dogs is an impact to all targeted MNES, with particular impact of wild dog on Koala, and fox on Greater Glider.

Fencing design surrounding the hospital site boundary and the hospital itself has been developed to allow MNES fauna, specifically Koala to access the retained bushland while limit the access of feral predators (namely wild dogs and foxes) to reduce threats to MNES. Climbable fauna-friendly fencing will be installed along the eastern, western, and southern site boundary to continue to allow the movement of MNES fauna across the boundary into and out of the retained bushland habitat. This fencing will aim to exclude wild dogs and foxes, while allowing Koala to access the retained bushland. Once stalled, dogs and foxes, if present, will be eradicated from the retained bushland area. Ongoing monitoring and management will ensure risk of attack from feral predators is mitigated.

5.6.2 Proposed Management Actions

Management actions to reduce the risk of feral animal predation impacts in the retained bushland area include:

- Installation of fencing around site.
- Once the fencing is installed, undertake Year 1 baseline pest monitoring to identify abundance of feral or unwanted pests within the bushland area prior to eradication. These surveys will develop the baseline abundance of feral animal populations, identify 'hot spots' (e.g., dams), and key activity periods (e.g., dusk).
- Best-fit methods for control and monitoring of management programs will be guided in response to the results of the baseline pest monitoring, and by relevant threat abatement plans and recommended DAF Monitoring Techniques for Vertebrate Pests (Wild Dogs, Feral Cats and Foxes) to be employed by professional pest animal controllers. To work effectively this approach will involve adaptive management, which considers each method relative to the baseline data collected to determine the most effective pest management measures for the bushland area.
- Interim (annual) monitoring will primarily include the deployment of cameras in identified activity hot spots to provide annual information on changes in population and/or hot spot locations of pest animals.

- Five-yearly (milestone) monitoring will repeat the baseline monitoring techniques in an effort to obtain a comparison of pest animal population numbers, and effectiveness of management techniques employed. Any results or required changes identified in the interim monitoring will be used to guide the best practice of the five-yearly monitoring efforts.

Foxes

Notably, from the Threat Abatement Plan for Predation by European Foxes (DEWHA 2008a), 'control of foxes is difficult; control methods include baiting, shooting, trapping, den fumigation or destruction, and exclusion fencing. However, apart from broadscale baiting, the methods are expensive, labour intensive, long term and of limited effectiveness (Saunders and McLeod 2007).' Notably, in this unique circumstance relative to the broader Australian landscape, the entire retention area is to be fenced and resident foxes eradicated. Therefore, it is considered more likely that the control methods employed will be effective.

Regarding various control techniques for foxes, in most situations baiting is the most effective method of reduction, however, it is important to consider risk to other carnivorous native species if present (DEWHA 2008b). Where there is high risk of impacts on non-target species, fox suppression can be effective at a local scale, and in this circumstance local separation by fencing is to be implemented (DEWHA 2008b). Predator-proof fencing and maintenance costs mean that it is likely to be useful for small areas only (Aviss and Roberts 1994), such as the case here. Fence designs to exclude foxes vary, but their relative effectiveness has not been accurately assessed (Long and Robley 2004), with 1500 mm to 1800 mmm high fences proposed in this case. Notably, the provision of extensive rehabilitation across the retention area will provide suitable hiding places for native prey species making them less likely to be caught by foxes (Saunders et al. 1995), so is an additional tool to reduce potential adverse effects from fox predation.

Feral Cats

Regarding feral cat controls, trapping is one technique recommended in this circumstance. Standard operating procedures for trapping of feral cats using cage traps (Sharp 2012a) and padded-jaw traps (Sharp 2012b) are to be employed, as described in the NSW Department of Primary Industries "Monitoring Techniques for Vertebrate Pests: Feral Cats" (Mitchell and Balogh 2007). With both techniques, skilled operators are required to set the traps and lures to attract the feral cats. Trapping is expensive, labour intensive and time consuming but is suitable on a small scale as is the case here. Baiting can also be deployed, however, it is not considered as effective as foxes and cats tend to only be attracted to baits when under food stress (Algar et al. 2007), and also may pose threat to native species (COA 2015).

This management plan aligns with the relevant abatement plans as follows:

- Fox - Main Objective 2 – Promote the maintenance and recovery of native species and ecological communities that are affected by fox predation. This will be primarily through contribution to the regional control program for the species.
- Feral Cats – Objective 1 – Effectively control feral cats in different landscapes. This management plan will be interpreted and appropriately implemented for the area as this is important so that control programs for feral cats achieve the outcome of reduced predation of threatened and near-threatened native species, and other native species.

Where practical and appropriate; participate in pest management planning and stakeholder engagement with immediate land holders and Council to foster joint sub regional scale action plans and ensure effective pest management in the locality of the offset area.

The proponent will update the current MNES management plan to include the feral animal management program and calendar of annual activities planned to control feral species by the end of Year 1, when the baseline survey information has been collected and can inform the implementation of the feral animal management plan, which will commence in Year 2. The proponent will update the plan following the Year 5, 10, 15, and 20 surveys and integrate the results into the updated plan. Baseline and milestone surveys will identify site-specific triggers for the proposed adaptive management measures.

Relevant guidelines and standard operating procedures that will be used to guide and implement the feral animal management plan include, but are not limited to:

- Threat abatement plan for predation by the European red fox (DEWHA 2008a)
- Background document for the threat abatement plan for predation by the European red fox (DEWHA 2008b).
- Threat abatement plan for predation by feral cats (DoE 2015).
- DAF Monitoring Techniques for Vertebrate Pests (Wild Dogs, Feral Cats and Foxes)
- NSW Department of Primary Industries "Monitoring Techniques for Vertebrate Pests: Feral Cats" (Mitchell and Balogh 2007a)
- NSW Department of Primary Industries "Monitoring Techniques for Vertebrate Pests: Wild Dogs" (Mitchell and Balogh 2007b)
- NSW Department of Primary Industries "Monitoring Techniques for Vertebrate Pests: Foxes" (Mitchell and Balogh 2007c)
- Standard operating procedure: trapping of feral cats using cage traps (Sharp 2012a)
- Standard operating procedure: trapping of feral cats using padded-jaw traps (Sharp 2012b)
- Influence of bait type, weather and prey abundance on bait uptake by feral cats (*Felis catus*) on Peron Peninsula, Western Australia (Algar et al. 2007)
- Guide for camera trapping wild dogs, foxes and feral cats (NSW DPI 2008)

Following the baseline surveys, results will be considered with respect to the guidelines and operating procedures listed above in order to determine the most appropriate timings, duration, method, and locations for the management measures. This information will be included in the updated feral animal management plan.

5.6.3 Tasks, Completion Criteria and Timing

Timing	Completion Criteria
Year 1	Complete detailed baseline / seasonal feral animal survey(s) to identify abundance
Year 2 – 5	Eradicate resident feral animals and implement ongoing management
Year 5	Replicate the Year 1 detailed feral animal survey(s) to guide adaptive management if required
Year 6 – 20	Implement ongoing pest monitoring and management on a yearly basis
Year 10, Year 15 & Year 20	Repeat the Year 5 detailed surveys in year 10, 15 and year 20 to guide adaptive management as required and ensure no feral animal incursion

5.6.4 Monitoring

Baseline Monitoring (Year 1)

Complete baseline surveys and range estimate of feral animals in bushland area in Year 1. Survey methods and results to be provided in relevant Annual Compliance Report. Further details on baseline surveys are provided in the table below.

Interim monitoring

Annual (interim) pest monitoring will primarily include the deployment of cameras in identified activity hot spots to provide annual information on changes in population and/or hot spot locations of pest animals. Further details on baseline surveys are provided in the table below.

Milestone monitoring

Milestone monitoring will be conducted at Years 5, 10, 15, and 20. These surveys will be a replication of the baseline monitoring surveys to determine the effectiveness of the feral animal control techniques implemented until that time.

Reporting

Reporting on the survey methods and results will be provided in the relevant Annual Compliance Report. The aim of this reporting is to demonstrate a maintenance of reduced vertebrate pest species incidence and or occurrence below the year 1 baseline survey results.

Years 5, 10, 15, and 20 reporting will include repeat survey methods, results data and comparative analysis demonstrating reduction in vertebrate pest management evidence and impacts based on techniques employed in Years 2-5. Report to include any adaptive management recommended changes to pest control and reduction methods to be deployed for years 6-10. Details of surveys, results and alterations to management strategies to be provided to proponent in the Annual Compliance Report for the Action. The feral animal management plan is to be updated following milestone reporting.

Baited Motion Sensor Monitoring

Camera trapping involves setting up a fixed digital camera to capture images or video of animals which pass in front of a camera. It is a non-invasive technique designed to detect medium to large sized animals as they pass, although it is possible to detect smaller animals depending on the set-up. This set-up identifies fauna activity beyond the scope of direct observational studies and with the absence of potential observer impacts.

Infrared sensing cameras with an infrared flash are deployed, which use motion to trigger. Three cameras will be set up within the bushland area, and are to be deployed seasonally, with a focus on spring and summer, where wild dogs and foxes are known to be more active. Cameras are to be attached 30-100 cm from the ground on a tree or post and directed towards landscape features. The cameras are to be left to record for a minimum of two weeks. The cameras are to be baited in order to target evidence of wild dogs and other potential threats to known MNES. Refer to NSW DPI 2008 for further information on camera set up.

Feral Cat Monitoring

Monitoring Feral Cats is known to be difficult due to the elusive and trap-shy nature of the pest. The NSW Department of Primary Industries "Monitoring Techniques for Vertebrate Pests: Feral Cats" advises several potential techniques for identifying Feral Cat presence and monitoring success of control programs; spotlighting, track counts and trapping (including cage traps and padded-jaw traps) (Mitchell and Balogh 2007). The Pest Management Program will implement a combination of these methods as best fit for the conservation outcomes and Feral Cat management within the monitoring area, with thought to the costs of proposed control, and size and accessibility of the offset site.

This guide also stresses that the success of a Feral Cat control program for native species protection needs to work in conjunction with wild dog and fox control. Therefore, the integrated pest management being proposed at project site is considered the most appropriate to ensure conservation outcomes for the listed threatened species.

Feral Animal Management Plan

Item	Details
Description	The goal of the Feral Animal Management Plan is to eradicate resident feral animals and implement ongoing management.
Location	The feral animal management programme is to occur across the entire project area, with targeted efforts located in areas identified during the baseline monitoring programme as being activity "hot spots"
Timing	Year 1: Detailed Baseline Monitoring Programme - Remote sensor camera deployment for minimum of 28 nights in same locations four times in the year, across all seasons, as per NSW DPI 2008. Motion detection camera locations are to be recorded with hand-held GPS. GPS coordinates and photos to be recorded.

	- Field surveys, providing datasheets will detail the time of year of the monitoring event, record observed scats or tracks, photo location and notes of any evidence of positive and/or negative changes in pest occurrence. - GPSs will be used to locate the presence of pest species, with a focus on species identified during baseline field surveys via notable tracks or scats. - Transfer GPS data to spatial data programs to generate pest occurrences and collate all data in excel spreadsheets and save all digital photos to file for ongoing monitoring and reporting purposes. - Where pest presence is detected, targeted trapping and baiting programs will be implemented on completion of the monitoring program. The collected data will inform locations for intensive trapping, baiting, shooting efforts - The feral animal control strategy will use the baseline data to build a calendar of annual activities based around varying control methods, seasons and species. Years 2-5: Intensive Pest Management - Implement feral animal control strategy using the baseline data, based on a calendar of annual activities around varying control methods, seasons and species. - Best practice management measures will be implemented, and will include cage traps, padded jaw traps, shooting, baiting, baited infra-red sensing cameras, etc. - Adapt methods and locations as needed based on outcomes of ongoing management plan - Report annually on methods implemented and results of management techniques as part of Annual Compliance Reporting Year 5: Repeat Detailed Baseline Monitoring Programme Years 6-9: Repeat Intensive Pest Management Year 10: Repeat Detailed Baseline Monitoring Programme Years 11-14: Repeat Intensive Pest Management Year 15: Repeat Detailed Baseline Monitoring Programme Years 16-19: Repeat Intensive Pest Management Year 20: Repeat Detailed Baseline Monitoring Programme
Responsibility	The proponent is responsible for establishing, funding, and resourcing the feral animal management plan. To ensure effective implementation, the following are required: Detailed Pest Surveys: Baseline and ongoing targeted surveys must be conducted by a qualified ecologist. All contractors for all pest control measures will be suitably qualified. Pest control contractors will be responsible for the upkeep of appropriate training for all staff. Pest control contractors will be responsible for the data collection and upkeep of all data, and provide the data to the proponent when available and required for reporting.
Measuring and monitoring	The effectiveness of pest management actions will be measured and monitored through a structured process: 1. Detailed Baseline Survey (Year 1) – Establishes initial pest population data.

2. Interim surveys – Camera deployment twice per year
3. Scheduled Repeats of Baseline Monitoring Surveys (Years 5, 10, 15, 20)
4. Progressive reporting will consist of:

- Annual Compliance Reports – Each survey's findings, pest management outcomes, any changes to management strategies, etc., yearly analysis. The threat abatement actions and outcomes within any calendar year will be reported on and will provide a number of lead indicators towards a reduction in occurrence and impacts.

- Five yearly reporting will include repeat survey methods, results data and comparative analysis demonstrating reduction in vertebrate pest management evidence and impacts based on techniques employed in Years 2-5, 6-10, 11-15, 15-20. Report to include any adaptive management recommended changes to pest control and reduction methods to be deployed for the next reporting period.

Risks & Adaptive Management

If greater than the baseline pest survey results remain at the milestone reporting events, then consultation with an expert in feral animal control is required to assist in adaptively managing the program and implementation to ensure eradication and continued control below the baseline survey has been achieved. In addition, consultation with relevant state and commonwealth government departments may be conducted.

The repeat surveys are designed to deliver data on outcomes being achieved. If the surveys do not demonstrate the targeted effectiveness the implementation strategy will be adjusted to:

- Adopt new management techniques;
- Increase successful techniques and reduce less successful management methods;
- Increase intensity of implementation program;
- Change the timing or locality of proposed target treatment locations or events; and
- Allow the site strategy to assimilate into any new broader threat abatement programs.

This adaptive management approach ensures regulatory compliance, continuous improvement, long-term effectiveness, and alignment with broader conservation and threat abatement goals.

6. Reporting

Each calendar year an annual report will summarise:

- Management actions completed during the 12-month period;
- Monitoring activities and results;
- Assessment of results against performance criteria to determine effectiveness;
- Identification of any issues that arose that require adaptive management and alternative actions.

The annual report will contribute to any required Annual Compliance Reporting specified within the EPBC approval once attained.

6.1. Responsibilities

Management strategies outlined within this plan are the responsibility of all personnel undertaking Project activities. This MNES Management Plan will be implemented by:

1. Project director to initiate formal reviews of MMP.
2. Project Environmental Manager to ensure implementation of prescribed avoidance, mitigation and management strategies for each phase within this plan.
3. Project Site Manager for ensuring the MMP is implemented during clearing, construction and operation.
4. Project Environmental Manager to review results of review and ensure corrective actions are implemented in a timely and effective manner.

7. Risk Assessment

A risk assessment was undertaken to assess the risks associated with failing to achieve the management objectives outlines in this MNES Management Plan for mitigating impacts to MNES. Risks are generally described and assessed against the likelihood and consequence model outlined in the Commonwealth Government's Department of Environment – *Environmental Management Plan Guidelines* (2014) as shown in **Table 13**.

Table 13: Risk Rating Table (DAWE, 2022)

RISK MATRIX	
Likelihood (L): A qualitative measure of likelihood how likely is it that this event/circumstances will occur both before and after management activities are implemented	
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances
Consequence (C): Qualitative measure of what will be the consequence/result if the issue does occur	
Minor	Minor incident of environmental damage that can be reversed (*e.g. short-term delays to achieving strategy objectives, implementing low-cost, well-characterised corrective actions*)
Moderate	Isolated but substantial instances of environmental damage that could be reversed with intensive efforts (*e.g. short-term delays to achieving strategy objectives, implementing well-characterised, high cost/effort corrective actions*)
High	Substantial instances of environmental damage that could be reversed with intensive efforts (*e.g. medium-long term delays to achieving objectives, implementing uncertain, high-cost/effort corrective actions*)
Major	Major loss of environmental amenity and real danger of continuing (*e.g. strategy objectives are unlikely to be achieved, with significant legislative, technical, ecological and/or administrative barriers to attainment that have no evidenced mitigation strategies*)
Critical	Severe widespread loss of environmental amenity and irrecoverable environmental damage (*e.g. strategy objectives are unable to be achieved, with no evidenced mitigation strategies*)

Final Risk Rating (R): A function of multiplying Likelihood (L) and Consequence (C)

		Consequence				
Likelihood		Minor	Moderate	High	Major	Critical
	Highly Likely	Medium	High	High	Severe	Severe
	Likely	Low	Medium	High	High	Severe
	Possible	Low	Medium	Medium	High	Severe

	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

Table 14: Risk Assessment and Management Table

Management objective/desired outcome	Risk Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions
			L	C	RL		
Ensure clearing of native vegetation and/or disturbance to MNES habitat does not occur within the retained habitat (i.e. remains within the hospital impact area).	Clearing of habitat for MNES occurs outside of the approved impact area.	• Areas of vegetation to be removed will be clearly marked with temporary fencing. • GIS shapefiles of exclusion areas will be provided to clearing personnel. • All relevant personnel to participate in pre-start meetings and site inductions. • Pre-clearance surveys undertaken prior to clearing • Fauna-spotter catcher to be present for all clearing activities	U	High	Med	Evidence of clearing within exclusion areas. Damage to retained vegetation from vehicle tracks etc.	Works are to cease immediately if clearing occurs within exclusion zone. Assessment and reporting to DCCEEW and DES. Revegetation to occur in cleared areas.
Injuries or mortality to MNES threatened species are avoided and mitigated during	Vehicle strike to MNES and other fauna. Injury or mortality from	• Trees to be felled sequentially and in accordance with methodology outlined in the VCFMP.	U	High	Med	Any injury or mortality to a MNES species.	Investigation to determine the cause of fauna injury/mortality. Reduce vehicle speeds further. Install

Management objective/desired outcome	Risk Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions
			L	C	RL		
clearing and construction.	clearing processes.	• Reduced speed limits enforced within clearing and construction zone. • Fauna-spotter catcher to be onsite at all times during clearing. • Wildlife signage to be installed. • Site induction including injured fauna protocols and procedures. • Fauna exclusion fencing will be installed surrounding the construction site.					additional fauna exclusion fencing where appropriate.
Weed (WoNS) Management	Introduction of invasive weed species and / or failure to control existing invasive weed species.	• Undertake weed management in accordance with the Rehabilitation Management Plan. • Vehicles to wash down prior to site entry. • Site induction to inform weed management responsibilities of staff, contractors and visitors.	U	Mod	Low	New weed species detected. Weed monitoring determine increase in density of existing weeds. Failure of weed control attempts.	Investigate cause of increased weed cover. Increase frequency and duration of weed control efforts. Investigate alternate weed management controls. Weed control program to be expanded/ adapted to improve outcomes. Amend weed hygiene practices.

Management objective/desired outcome	Risk Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions
			L	C	RL		
		• Access to retained vegetation will be limited. • Chemical and physical control methods implemented in accordance with Rehabilitation Management Plan.					
Fire management	A high intensity uncontrolled fire occurs onsite which causes loss of habitat.	• Fire management to occur onsite in accordance with the site-specific Bushfire Management Plan. • Actions as directed by the local authority which may include prescribed burning or other techniques undertaken in consultation with the Queensland Rural Fire Brigade to manage fuel loads. • Maintain bushfire zones and fire breaks as outlined in the Bushfire Management Plan.	U	High	Med	Uncontrolled or unplanned fires occur. Monitoring to review access tracks, fire breaks, fuel loads and outcomes of controlled burns.	Emergency Response Plan enacted. Implement fire control. Repair any fire breaks and access tracks. Stay informed through the Rural Fire Service. Assess damage caused by the wild fire and monitor for natural regeneration. Monitoring to occur 3-6 months post event or after the next wet weather event (whichever is sooner). Where natural regeneration is failing to thrive, assist natural regeneration through direct seeding and planting.

Management objective/desired outcome	Risk Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions
			L	C	RL		
Maintain habitat for MNES within retained vegetation.	MNES habitat degradation.	• Fencing design to exclude feral pest animals from the retained habitat. • Weed management in accordance with the Rehabilitation Management Plan. • Areas of MNES habitat within the retained vegetation not to be cleared – clearly delineated by temporary fencing and signage. • Site access along designated tracks. • Selected hollow-bearing trees will be salvaged and relocated into the retained habitat area. • Light spill will be directed internally.	U	Mod	Low	Evidence of clearing within exclusion areas. Increased weed infestation. Evidence of habitat degradation.	Develop species specific management plans. MNES habitat to be rehabilitated in accordance with the site-specific Rehabilitation Management Plan. Increase weed control measures and evaluate effectiveness. Repair fences if damaged or install new ones.

Management objective/desired outcome	Risk Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions
			L	C	RL		
		• Fire management in accordance with Bushfire Management Plan					
Rehabilitation within retained habitat.	High plant stock failure within rehabilitation areas.	• Implement revegetation in accordance with Rehabilitation Management Plan. • Undertaken weed control activities.	U	Mod	Low	Planting and monitoring event schedules by the qualified bush regenerator. Scheduled monitoring/surveys and Annual Compliance Reports.	If there is a high rate of plant stock failure adaptive management and corrective actions will be implemented and may include, additional supplementary planting, direct seeding, weed control, fertiliser, water spike, mulching, tree guards, etc. Implement adaptive management and corrective actions. Should plant stock fail supplementary planting, direct seeding, weed control, fertiliser, amelioration or other management actions necessary to stimulate tree growth.

Management objective/desired outcome	Risk Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions
			L	C	RL		
Feral animal controls	MNES injury or death due to predation	• Fencing design to exclude feral pest animals from the retained habitat. • Implement feral animal controls • Continue to monitor for feral animals and implement controls if required	U	High	Med	Feral animals are in the first instance eradicated from the bushland area once fenced. If feral animals are subsequently detected during monitoring events, control measures are implemented.	The repeat surveys are designed to deliver data on outcomes being achieved. If the surveys do not demonstrate the targeted effectiveness the implementation strategy will be adjusted to: • Adopt new management techniques; • Increase successful techniques and reduce less successful management methods; • Increase intensity of implementation program; • Change the timing or locality of proposed target treatment locations or events; and

Management objective/desired outcome	Risk Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions
			L	C	RL		
							• Allow the site strategy to assimilate into any new broader threat abatement programs.

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9. Attachments

Attachment A

EPBC 2022/09397 Approval

Attachment B

Referral Decision (EPBC 2022/09397)

Attachment C

Flora and Fauna lists

Attachment D

VCFMP

Attachment E

NBH Fencing Approach

Attachment F

Rehabilitation Management Plan

Attachment A

EPBC 2022/09397 Approval

Notification of approval

Bundaberg Hospital, Thabeban, Queensland (EPBC ref 2022/09397)

This decision is made under section 130(1) and 133(1) of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Note that section 134(1A) of the EPBC Act applies to this approval. That provision provides, in general terms, that if the approval holder authorises another person to undertake any part of the Action, the approval holder must take all reasonable steps to ensure that the other person is informed of any conditions attached to this approval, and that the other person complies with any such conditions.

Approved Action

person to whom the approval is granted (approval holder)	Department of Health QLD ABN: 66 329 169 412
Action	To construct and operate the New Bundaberg Hospital and associated infrastructure in Thabeban, Queensland. See EPBC Act referral 2022/09397.

Approval decision

Decision	My decision on whether or not to approve the taking of the Action for the purposes of the controlling provision for the Action is as follows

Controlling Provision	**Decision**
Listed threatened species and communities (section 18 and section 18A)	Approved

period for which the approval has effect	This approval has effect until 09 April 2059
conditions of approval	The approval is subject to conditions under the EPBC Act as set out in Annexure A.

Person authorised to make decision

name and position	Mark Say, A/g Branch Head, Environment Assessments Queensland Branch
signature	
date of decision	19 April 2024

Annexure A

Note: Words appearing in **bold** have the meaning assigned to them at PART C – DEFINITIONS.

Part A – Avoidance, mitigation, and compensation conditions

CLEARING LIMITS

1) To avoid and mitigate **harm** to **protected matters**, the approval holder must not take the Action outside the **Action area**.

2) To avoid and mitigate harm to **protected matters**, the approval holder must not **clear**:

   a) outside of the **development footprint**

   b) more than a combined total of 24.46 hectares (ha)

   c) more than 23.56 ha of **Koala habitat**,

   d) more than 23.56 ha of **Grey-Headed Flying Fox habitat**,

   e) more than 23.56 ha of **Greater Glider habitat**

3) To avoid and mitigate **harm** to **protected matters**, the approval holder must not **construct** outside the **development footprint**.

ACTION MANAGEMENT PLANS

4) To avoid and mitigate harm to the **Koala**, **Grey-headed Flying-fox** and **Greater Glider** as a result of the Action, the approval holder must commence implementing the **Vegetation Clearing and Fauna Management Plan** from the date of **Commencement of the Action** and continue to implement the **Vegetation Clearing and Fauna Management Plan** until the expiry of this approval.

5) The approval holder must submit to the **department** for the **Minister's** approval a Matters of Environmental Significance Management Plan (MNES Management Plan)**.** The MNES Management Plan must specify a program of measures that will be implemented to reduce the presence of feral predators (including foxes and cats), and how the effectiveness of the program will be monitored and compared to baseline data for the **Action area**. The measures must be:

   i) in line with relevant threat abatement plans including the *Threat abatement plan for predation by the European red fox 2008* and *Threat abatement plan for predation by feral cats 2015*

   ii) known effective methods for the control of these species and

   iii) supported by scientific evidence

6) The approval holder must commence implementing the approved MNES Management Plan within 12 months of **Commencement of the Action** and continue to implement the approved MNES Management Plan at least until the expiry of this approval.

7) The approval holder must not commence **main construction works** unless the **Minister** has approved the MNES Management Plan in writing.

PROTECTED MATTERS MANAGEMENT MEASURES

8) The approval holder must ensure that no **Koala**, **Grey-headed Flying-fox** or **Greater Glider** is killed or injured as a result of the Action.

9) The approval holder must immediately arrange veterinary care or assistance from an experienced **wildlife expert** if any **Koala**, **Grey-headed Flying-fox** or **Greater Glider** are found injured within or adjacent to the **Action area** during **clearing** or **construction**.

10) To avoid and mitigate **harm** to **protected matters**, the approval holder must ensure that all **clearing** activities are performed under the supervision of a **fauna spotter catcher** and **suitably qualified field ecologist**.

11) In taking the Action, and for the protection of **protected matters**, the approval holder must:

a) ensure a **fauna spotter catcher** and **suitably qualified field ecologist** commence monitoring for **protected matters** at least 30 minutes prior to all **clearing** activities to detect the presence of **protected matter** individuals

b) ensure that the **fauna spotter catcher** and **suitably qualified field ecologist** continually monitor for **protected matters** during all **clearing** activities

c) record the date, time and location at which any **protected matters** are observed, cordoned off, protected, move of their own accord and/or relocated by a **fauna spotter catcher** from the **Development Footprint**

d) ensure that the **fauna spotter catcher** does not, in carrying out their duties, act inconsistently with the obligations of their licence

e) cease all **clearing** and **construction** if a **protected matter** is observed within the **Development Footprint**, and delay resumption of any **clearing** and **construction** until the observed **protected matter** has either vacated the **Development Footprint** on its own accord or been relocated out of the Action area by a **fauna spotter catcher**

f) provide the **Return of Operations Report** and **Wildlife Management Report** to the **department** within six (6) months of commencement of the **operational phase**

g) provide the updated Bushfire Hazard Assessment and Management Plan (BHMP) to the **department**, as required under the Ministerial Infrastructure Determination (MID) 1222-0662 decision, within 6 months of commencement of the **operational phase**

h) ensure the updated BHMP takes into consideration the **Conservation Advice for the Greater Glider**

i) commence the installation of temporary **Koala exclusion fencing** within 48 hours after **clearing** is commenced within the **development footprint** and complete the installation of temporary **Koala exclusion fencing** prior to each **construction** stage commencing within the **development footprint**, to prevent any **Koala** from entering an area where **construction** is taking place

j) ensure that the temporary **Koala exclusion fencing** around each **construction** area remains in place until all **construction** activities within the fenced area are completed

k) ensure sequential **clearing** of vegetation is conducted in accordance with **Queensland's Koala Sensitive Design Guideline** to allow **protected matters** to safely move out of the **clearing** area and into surrounding areas of **relevant habitat**

l) implement the **sequential clearing provisions**, including all provisions specified for areas which may be **cleared** in any one stage, periods of non-**clearing** between stages, maintaining habitat links and restrictions on **clearing** trees containing **Koalas**

m) prohibit anyone from bringing any dogs into the **Action area** during **construction**

n) prior to the **commencement of construction**, install prominent signage around the perimeter of the **Action area** advising that dogs are prohibited

o) at least 6 months prior to the commencement of the **operational phase**:

i) install permanent **Koala exclusion fencing** along the entire length of the defined **Fauna Exclusion Fencing**, and

ii) install **Koala poles** every 200 metres along the permanent **Koala exclusion fencing** fence line on the side closest to the hospital buildings to ensure any stranded **Koalas** can relocate on their own accord to adjacent vegetation.

p) ensure all **Koala exclusion fencing** is installed and maintained in accordance with **Queensland's Koala Sensitive Design Guidelines** until the expiry of this approval,

q) implement safe movement solutions, in accordance with **Queensland's Koala Sensitive Design Guidelines** to facilitate the safe movement and dispersal of the **Koala** from within the **development footprint** into the adjacent landscape from the **commencement of the Action.**

REHABILITATION

12) The approval holder must submit to the **department** for the **Minister's** approval a Rehabilitation Management Plan**.** By implementing the Rehabilitation Management Plan, the approval holder must achieve the **rehabilitation benchmarks.**

The Rehabilitation Management Plan must include:

a) benchmarks and outcomes for the rehabilitation of the disturbed areas outside the development footprint as shown in the map in Appendix A5 at 1, 5, 10, 15 and 20 year intervals

b) trigger values for corrective actions

c) corrective actions to be implemented to ensure that the **rehabilitation benchmarks** are achieved, and

d) monitoring and reporting measures to ensure that if trigger values occur they will be promptly detected and that timely progress is made to achieve the **rehabilitation benchmarks** and that subsequently they are maintained.

13) To minimise and manage harm to the **Koala**, **Grey-headed Flying-fox** and **Greater Glider** as a result of the Action, the approval holder must commence implementing the approved Rehabilitation Management Plan within 12 months of **Commencement of the Action** and continue to implement it at least until the expiry of this approval.

14) The approval holder must not commence **main construction works** unless the **Minister** has approved the Rehabilitation Management Plan in writing.

OFFSET SITE(S)

15) To compensate for the residual impacts of the Action on the **Koala**, **Grey-headed Flying-fox** and **Greater Glider**, the approval holder must, submit to the **department** for the **Minister's** approval, an Offset Management Plan proposing environmental offsets for impacts to the **Koala**,

Grey-headed Flying-fox and **Greater Glider**. The approval holder must not commence **main construction works** unless the Offset Management Plan has been approved in writing by the **Minister**. The approval holder must commence implementing the approved Offset Management Plan within 20 **business days** of the date on which the **Minister** approves the Offset Management Plan and continue to implement the approved Offset Management Plan at least until the expiry of this approval.

16) The approval holder must, within 5 **business days** of commencing implementation of the Offset Management Plan, notify the **department** of the date on which implementation of the Offset Management Plan commenced.

17) The Offset Management Plan must meet the requirements of the **Environmental Offsets Policy** and the **Environmental Management Plan Guidelines** to the satisfaction of the **Minister**. The Offset Management Plan must:

    a) be prepared by a **suitably qualified ecologist**, and

    b) be attached to the mechanism used to legally **secure** each offset area specified in the approved Offset Management Plan.

18) The Offset Management Plan must include:

    a) detailed information on the residual impacts to **Koala**, **Grey-headed Flying-fox** and **Greater Glider** that will be compensated for by the offset (Note: the offset comprises the **securement** of the **offset site(s)** and the habitat condition improvements to be achieved at the **offset site(s)**). This must include the area(s) of habitat for **Koala**, **Grey-headed Flying-fox** and **Greater Glider** (**protected matters**) and its condition and quality at all locations impacted by the Action which the offset is to address

    b) the relevant **protected matters** and a reference to the **EPBC Act** approval conditions to which the Offset Management Plan refers

    c) detailed information and a **shapefile** specifying the location, area and boundaries of the proposed offset site(s)

    d) detailed baseline information on the area(s) of habitat, its condition, and the presence (or not) of the **protected matters** at the proposed offset site(s),

    e) commitments to achievable improved ecological benefits at the proposed offset site(s) and the timeframes in which they will be achieved,

    f) a table summarising all commitments to achieve the proposed ecological benefits for **protected matters** at the proposed offset site(s), and a reference to where each commitment is detailed in the Offset Management Plan

    g) reporting and review mechanisms to inform the **department** annually regarding compliance with the management and environmental outcome commitments, and attainment and maintenance of the ecological benefits specified in the Offset Management Plan

    h) an assessment of risks to achieving the ecological benefit(s) and what risk management measures and/or strategies will be applied to address these,

    i) a monitoring program, which must specify:

i) measurable performance indicators and the timeframes for their achievement to gauge attainment of the ecological benefits for the **protected matters**

ii) trigger values for corrective actions, and

iii) the proposed timing (including season/time of day/frequency) methods and effort, and an explanation of how these will be effective for this purpose, of monitoring to detect trigger values, changes in the performance indicators and to gather evidence that effectively demonstrates actual progress towards, attainment of and maintenance of the ecological benefits for the **protected matters**.

j) corrective actions to be implemented to ensure that the proposed ecological benefits for the **protected matters** are achieved or maintained if trigger values are reached or performance indicators not achieved in the specified timeframes

k) links to relevant referenced plans or conditions of approval (including state approval conditions), and

l) how the proposed offset site(s) will be protected, and ecological benefits maintained, and have enduring protection.

19) The approval holder must achieve all offset outcomes at the offset site(s) as proposed in the approved Offset Management Plan by the time specified for each outcome in the approved Offset Management Plan. Once achieved, the approval holder must maintain or exceed these offset outcomes at least until the expiry of this approval.

20) The approval holder must not commence the **main construction works** unless the offset site(s) specified in the approved Offset Management Plan is/ are **controlled**.

21) The approval holder must notify and provide evidence to the **department** in writing within five (5) **business days** of each offset site being **controlled** and again within five (5) **business days** of each offset site being legally **secured**.

Part B – Administrative conditions

REVISION OF ACTION MANAGEMENT PLANS

22) The approval holder may, at any time, apply to the **Minister** for a variation to an action management plan approved by the **Minister** or as subsequently revised in accordance with the following conditions, by submitting an application in accordance with the requirements of section 143A of the **EPBC Act**. If the **Minister** approves a revised action management plan (RAMP) then, from the date specified, the approval holder must implement the RAMP in place of the previous action management plan.

23) The approval holder may choose to revise an action management plan required under conditions 4) or 5) or as subsequently revised in accordance with these conditions, without submitting it for approval under section 143A of the **EPBC Act**, if the taking of the Action in accordance with the RAMP would not be likely to have a **new or increased impact**.

24) If the approval holder makes the choice under condition 23) to revise an action management plan without submitting it for approval, the approval holder must:

a) Notify the **department** electronically that the approved action management plan has been revised and provide the **department** with:

i) An electronic copy of the RAMP.

ii) An electronic copy of the RAMP marked up with track changes to show the differences between the approved action management plan and the RAMP.

iii) An explanation of the differences between the approved action management plan and the RAMP.

iv) The reasons the approval holder considers that taking the Action in accordance with the RAMP would not be likely to have a **new or increased impact**.

v) Written notice of the date on which the approval holder will implement the RAMP (RAMP implementation date), being at least 20 **business days** after the date of providing notice of the revision of the action management plan, or a date agreed to in writing with the **department**.

b) Subject to condition 26), implement the RAMP from the RAMP implementation date.

25) The approval holder may revoke its choice to implement a RAMP under condition 23) at any time by giving written notice to the **department**. If the approval holder revokes the choice under condition 23), the approval holder must implement the action management plan in force immediately prior to the revision undertaken under condition 23).

26) If the **Minister** notifies the approval holder that the **Minister** is satisfied that the taking of the Action in accordance with the RAMP would be likely to have a **new or increased impact**, then:

a) Condition 23)23) does not apply, or ceases to apply, in relation to the RAMP.

b) The approval holder must implement the action management plan specified by the **Minister** in the notice.

27) At the time of giving the notice under condition 26)26) the **Minister** may also notify that for a specified period of time, condition 23)23) does not apply for one or more specified action management plans.

Note: Conditions 23), 24), 25), 26) and 27)27) are not intended to limit the operation of section 143A of the **EPBC Act** which allows the approval holder to submit a revised action management plan, at any time, to the **Minister** for approval.

SUBMISSION AND PUBLICATION OF PLANS

28) The approval holder must submit all **plans** required by these conditions electronically to the **department**.

29) Unless otherwise agreed to in writing by the **Minister**, the approval holder must publish each **plan** on the **website** within 15 **business days** of the date:

a) the **plan** is approved by the **Minister** in writing, if the **plan** requires the approval of the **Minister**, or

b) of this approval, if the version of the **plan** to be implemented is specified in these conditions, or

c) the **plan** is submitted to the **department** in accordance with a requirement of these conditions, if the **plan** does not require the approval of the **Minister**, or

d) the **plan** is approved by a Queensland government official as required under a Queensland government condition which must be complied with in accordance with these **EPBC Act** conditions.

30) The approval holder must keep all **plans** required by these conditions published on the **website** until the expiry date of this approval.

31) The approval holder is required to exclude or redact **sensitive ecological data** from **plans** published on the **website** or otherwise provided to a member of the public. If **sensitive ecological data** is excluded or redacted from a **plan**, the approval holder must notify the **department** in writing what exclusions and redactions have been made in the version published on the **website**.

NOTIFICATION OF DATE OF COMMENCEMENT OF THE ACTION

32) The approval holder must notify the **department** electronically of the date of **commencement of the Action**, within 5 **business days** following **commencement of the Action**.

33) The approval holder must not **Commence the Action** later than 5 years after the date of this approval decision.

MODIFICATIONS TO STATE OR TERRITORY APPROVAL

34) The approval holder must notify the **department** in writing of any proposed change to the Ministerial Infrastructure Designation (MID) approval that may relate to **protected matters** within two (2) **business days** of formally proposing a change and within five (5) **business days** of becoming aware of any proposed change.

35) The approval holder must notify the **department** in writing of any change to the MID approval conditions that may relate to **protected matters**, within ten (10) **business days** of a change to conditions being finalised. This notification must include a copy of the finalised changes to the MID conditions.

COMPLIANCE RECORDS

36) The approval holder must maintain accurate and complete **compliance records**.

37) If the **department** makes a request in writing, the approval holder must provide electronic copies of **compliance records** to the **department** within the timeframe specified in the request.

Note: Compliance records may be subject to audit by the **department**, or by an independent auditor in accordance with section 458 of the **EPBC Act**, and/or be used to verify compliance with the conditions. Summaries of the results of an audit may be published on the **department's** website or through the general media.

38) The approval holder must ensure that any **monitoring data** (including **sensitive ecological data**), surveys, maps, and other spatial and metadata required under the conditions of this approval are prepared in accordance with the *Guidelines for biological survey and mapped data,* Commonwealth of Australia 2018, or as otherwise specified by the **Minister** in writing.

39) The approval holder must ensure that any **monitoring data** (including **sensitive ecological data**), surveys, maps, and other spatial and metadata required under the conditions of this approval are prepared in accordance with the *Guide to providing maps and boundary data for EPBC Act projects*, Commonwealth of Australia 2021, or as otherwise specified by the **Minister** in writing.

40) The approval holder must submit all **monitoring data** (including **sensitive ecological data**), surveys, maps, other spatial and metadata and all species occurrence record data (sightings and evidence of presence) electronically to the **department** within 20 **business days** of each anniversary of the date of this approval decision.

ANNUAL COMPLIANCE REPORTING

41) The approval holder must prepare a **compliance report** for each 12-month period following the date of this approval decision (or as otherwise agreed to in writing by the **Minister**).

42) Each **compliance report** must be consistent with the *Annual Compliance Report Guidelines*, Commonwealth of Australia 2023.

43) Each **compliance report** must include:

    a) Accurate and complete details of compliance and any non-compliance with:

        i) each condition attached to this approval decision,

        ii) each condition imposed under a state approval, if a condition attached to this approval decision requires compliance with that state approval condition,

        iii) all commitments made in each **plan**, and

        iv) if any **incident** occurred, each **incident**.

    b) One or more **shapefile** showing all **clearing** of **protected matters**, and/or their habitat, undertaken within the 12-month period at the end of which that **compliance report** is prepared.

    c) A schedule of all **plans** in existence in relation to these conditions and accurate and complete details of how each **plan** is being implemented.

44) The approval holder must:

    a) Publish each **compliance report** on the **website** within 20 **business days** following the end of the 12-month period for which that **compliance report** is required.

    b) Notify the **department** electronically, within five (5) **business days** of the date of publication that a **compliance report** has been published on the **website**.

    c) Provide the weblink for the **compliance report** in the notification to the **department**.

    d) Keep all published **compliance reports** required by these conditions on the **website** until the expiry date of this approval.

    e) Exclude or redact **sensitive ecological data** from **compliance reports** published on the **website** or otherwise provided to a member of the public.

    f) If **sensitive ecological data** is excluded or redacted from the published version, submit the full **compliance report** to the **department** within five (5) **business days** of its publication on the **website** and notify the **department** in writing what exclusions and redactions have been made in the version published on the **website**.

Note: Compliance reports may be published on the **department's** website.

REPORTING NON-COMPLIANCE

45) The approval holder must notify the **department** electronically, within two (2) **business days** of becoming aware of any **incident** and/or potential non-compliance and/or actual non-compliance with the conditions or commitments made in a **plan**.

46) The approval holder must specify in the notification:

    a) Any condition or commitment made in a **plan** which has been or may have been breached.

    b) A short description of the **incident** and/or potential non-compliance and/or actual non-compliance.

    c) The location (including co-ordinates), date and time of the **incident** and/or potential non-compliance and/or actual non-compliance.

Note: If the exact information cannot be provided, the approval holder must provide the best information available.

47) The approval holder must provide to the **department** in writing, within 12 **business days** of becoming aware of any **incident** and/or potential non-compliance and/or actual non-compliance, the details of that **incident** and/or potential non-compliance and/or actual non-compliance with the conditions or commitments made in a **plan**. The approval holder must specify:

    a) Any corrective action or investigation which the approval holder has already taken.

    b) The potential impacts of the **incident** and/or non-compliance.

    c) The method and timing of any corrective action that will be undertaken by the approval holder.

INDEPENDENT AUDIT

48) The approval holder must ensure that an **independent audit** of compliance with the conditions is conducted for every three-year period following the **commencement of the Action** for the first nine years following this approval decision, and thereafter for every five-year period until this approval expires (unless otherwise specified in writing by the **Minister**).

49) For each **independent audit**, the approval holder must:

    a) Provide the name and qualifications of the nominated **independent** auditor, the draft audit criteria, and proposed timeframe for submitting the **audit report** to the **department** prior to commencing the **independent audit**.

    b) Only commence the **independent audit** once the nominated **independent** auditor, audit criteria and timeframe for submitting the **audit report** have been approved in writing by the **department**.

    c) Submit the **audit report** to the **department** for approval within the timeframe specified and approved in writing by the **department**.

    d) Publish each **audit report** on the **website** within 15 **business days** of the date of the **department's** approval of the **audit report**.

    e) Keep every **audit report** published on the **website** until this approval expires.

50) Each **audit report** must report for the three-year period preceding that audit report for the first nine years following this approval, and thereafter for every five-year period preceding the audit report.

51) Each **audit report** must be completed to the satisfaction of the **Minister** and be consistent with the *Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines*, Commonwealth of Australia 2019.

COMPLETION OF THE ACTION

52) The approval holder must notify the **department** electronically 60 **business days** prior to the expiry date of this approval, that the approval is due to expire.

53) Within 20 **business days** after the **completion of the Action**, and, in any event, at least 20 **business days** before this approval expires, the approval holder must notify the **department** electronically of the date of **completion of the Action** and provide **completion data**. The approval holder must submit any spatial data that comprises **completion data** as a **shapefile**.

Part C – Definitions

In these conditions any bolded use of a word or term refers to the below definition of that word or term:

Action area means the location of the Action, represented in Appendix A1 by the zone enclosed by the solid BLACK line designated 'Site DCDB' and the zone enclosed by the dashed RED line designated 'Project Disturbance Footprint [24.2 ha])'.

Audit report means a written report of compliance and fulfilment of the conditions attached to this approval, objectively evaluated against the audit criteria approved by the **department**.

Business day means a day that is not a Saturday, a Sunday or a public holiday in Queensland.

Clear, **cleared** or **clearing** means the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting, or burning of vegetation but does not include weeds (see the *Australian Weeds Strategy 2017-2027*, Commonwealth of Australia 2017 for further guidance).

Commence the Action or **commences the Action** means the first instance of any on-site **clearing**, **construction** or other physical activity associated with the Action, but does not include minor physical disturbance necessary to:

a) Undertake pre-clearance surveys or monitoring programs.

b) Install signage and/or temporary fencing to prevent unapproved use of the **Action area**, so long as the signage and/or temporary fencing is located where it does not **harm** any **protected matter**.

c) Protect environmental and property assets from fire, weeds, and feral animals, including use of existing surface access tracks.

d) Install temporary site facilities for persons undertaking pre-commencement activities so long as these facilities are located where they do not **harm** any **protected matter**.

Commencement of the Action means the date on which the approval holder **commences the Action**.

Completion data means an environmental report and spatial data clearly detailing how the conditions of this approval have been met.

Completion of the Action means the date on which all activities associated with the significant impacts of this approval, including achievement of the **offset outcomes**, will have permanently ceased and/or been completed.

Compliance records means all documentation or other material in whatever form required to demonstrate compliance with the conditions of approval (including compliance with commitments made in **plans**) in the approval holder's possession, or that are within the approval holder's power to obtain lawfully.

Compliance report means a written report of compliance with, and fulfilment of, the conditions attached to the approval.

Conservation Advice for the Greater Glider means the *Conservation Advice for* Petauroides volans *(greater glider (southern and central))*, Commonwealth of Australia 2022.

Construction means:

a) the erection of a building or structure that is, or is to be, fixed to the ground and wholly or partially fabricated on-site,

b) the alteration, maintenance, repair or demolition of any building or structure,

c) any work which involves breaking of the ground (including pile driving) or bulk earthworks,

d) any vegetation clearance

e) the laying of pipes and other prefabricated materials in the ground, and

f) any associated excavation work.

Construction does not include the installation of temporary fences and signage. **Construction** includes both **Early Works** and **Main Construction Works**.

Controlled means preventing, by way of ownership or binding contract with the landowner, any use of, or activity on the offset site that negates or is counter to the conservation purposes of the offset site.

Department means the Australian Government agency responsible for administering the **EPBC Act**.

Development footprint means the location of all clearing and construction activities represented in Appendix A1 by the red dashed line designated 'Project Disturbance Footprint [24.2 ha]' and the orange shaded area designated 'Stormwater Management Area [2.1 ha]'.

Early Works means:

a) The mobilisation and establishment of the **development footprint** (including transportable site office and workers camp accommodation)

b) **Clearing**, grubbing and stripping the **development footprint** of topsoil; and stockpiling

c) Preparation of the building platforms including inground piling and ground floor slabs

d) Installation of inground infrastructure services

e) Completion of roads

f) Completion of stormwater management works.

Environmental Management Plan Guidelines means the *Environmental Management Plan Guidelines*, Commonwealth of Australia 2014.

Environmental Offsets Policy means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy*, Commonwealth of Australia 2012.

EPBC Act means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Fauna Exclusion Fencing means the boundary along which **Koala exclusion fencing** will be installed in accordance with these conditions, as represented in Appendix A2 by the purple dashed line designated '1800h Fauna Exclusion Fencing'.

Fauna Spotter Catcher means a person holding an appropriate licence issued under the *Queensland Nature Conservation Act 1992* to detect, capture, care for, assess, and release wildlife disturbed by vegetation **clearance** activities who have at least three years' experience undertaking this work with **Koalas**, the **Grey-headed Flying-fox** and **Greater Gliders**.

Greater Glider refers to the **EPBC Act** listed threatened species *Petauroides volans* (southern and central).

Greater Glider habitat means any area that provides habitat suitable for the **Greater Glider**, including habitat described in the *Conservation Advice for* Petauroides *volans (greater glider (southern and central))*, Commonwealth of Australia 2022.

Grey-headed Flying-fox refers to the **EPBC Act** listed threatened species *Pteropus poliocephalus*.

Grey-headed Flying-fox habitat means any area that provides habitat suitable for the **Grey-headed Flying-fox**, including habitat described in the *National Recovery Plan for the Grey-headed Flying-fox* Pteropus poliocephalus, Commonwealth of Australia 2021.

Habitat quality means a measure of the overall viability of a site and its capacity to support **protected matters**, with respect to site condition, site context and species stocking rate and/or composition.

Harm means to cause any measurable direct or indirect disturbance or deleterious change as a result of any activity associated with the Action.

Incident means any event which has the potential to, or does, **harm** any **protected matter**.

Independent means a person or firm who does not have any individual, financial*, employment* or family affiliation or any conflicting interests with the Action, the approval holder or the approval holder's staff, representatives, or associated persons.

*Other than for the purpose of undertaking the role for which an independent person is required

Independent audit means an audit, conducted by an **independent** person who has professional qualifications, training, skills and/or experience related to the nominated subject matter and can give authoritative independent assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods and/or literature, as detailed in the *Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines*, Commonwealth of Australia 2019.

Koala means the **EPBC Act** listed threatened species *Phascolarctos cinereus* (combined populations of Queensland, New South Wales and the Australian Capital Territory).

Koala exclusion fencing means fencing which prevents the movement of **Koala** from one area to another such as into an area of active **clearing** or a **construction** site, as described in the *Koala-Sensitive Design Guideline: A guide to koala sensitive designed measures for planning and development activities*, State of Queensland 2022.

Koala habitat means any area that provides habitat suitable for the **Koala**, including habitat described in the *National Recovery Plan for the Koala* Phascolarctos *cinereus (combined populations of Queensland, New South Wales and the Australian Capital Territory)*, Commonwealth of Australia 2022.

Koala poles means the **Koala poles** to be placed along the **Koala exclusion fencing** to allow any **Koalas** that become stranded within the hospital footprint to easily relocate in their own accord to the adjacent vegetated area.

Main Construction Works means any **construction** work following the completion of **Early Works.**

Minister means the Australian Government Minister administering the **EPBC Act**, including any delegate thereof.

Monitoring data means the data required to be recorded under the conditions of this approval.

New or increased impact means any direct or indirect increase in the impacts of an Action, an increase to the likelihood of an impact occurring, a reduction to the monitoring or mitigation measures for a **protected matter**, and/or a change to the nature or management of an

environmental offset as outlined in the '*Guidance on 'new or increased impact' relating to changes to approved management plans under EPBC Act environmental approvals*, Commonwealth of Australia 2017'.

Operational phase means all activities after the date that the Bundaberg Hospital is opened for use by medical staff.

Plan means any action management plan or strategy that the approval holder is required by these conditions to implement.

Protected matter means a matter protected under a controlling provision in Part 3 of the **EPBC Act** for which this approval has effect, including **Koala**, **Grey-headed Flying-fox** and **Greater Glider**.

Queensland Herbarium BioCondition benchmarks refers to the Queensland Herbarium BioCondition benchmarks for regional ecosystem 12.5.4 in Appendix A4 below (downloaded 8 March 2024), available at: https://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks

Queensland's Koala Sensitive Design Guidelines means the *Koala-Sensitive Design Guidelines*, State of Queensland 2022.

Rehabilitation benchmarks means the vegetation benchmarks based on **Queensland Herbarium BioCondition benchmarks** at 1, 5, 10, 15 and 20 year intervals, from the **commencement of the Action** to achieve remnant vegetation status for rehabilitated areas in accordance with the definition of remnant vegetation under the *Queensland Vegetation Management Act 1999*.

Rehabilitation completion criteria refers to the completion criteria presented in Appendix A3.

Relevant habitat refers to the habitat of the impacted protected matter, comprising **Koala Habitat**, **Grey-headed Flying-fox habitat** and/or **Greater Glider Habitat**.

Return of Operations Report means the document to be prepared for the Queensland State Government by the **Fauna Spotter Catcher**, as described in the **Matters of National Environmental Significance Management Plan**.

Secure or **secured** or **securement** means to execute a legal agreement under relevant Queensland legislation, in relation to an offset site(s), to provide an enduring protection for the offset site(s) against any development incompatible with conservation.

Sensitive ecological data means data as defined in the *Sensitive Ecological Data – Access and Management Policy v1.0*, Commonwealth of Australia 2016.

Sequential clearing provisions means the provisions specified in *Sequential clearing in Koala district A or B under the Nature Conservation (Koala) Conservation Plan 2017* under the *Nature Conservation Act 1992* (Qld).

Shapefile means location and attribute information about the Action provided in an Esri shapefile format containing:

a) '.shp', '.shx', '.dbf' files,

b) a '.prj' file which specifies the projection or geographic coordinate system used, and

c) an '.xml' metadata file that describes the shapefile for discovery and identification purposes.

Suitably qualified ecologist (for the purpose of preparing and implementing environmental management plans) means a person who has relevant professional qualifications and:

a) at least three (3) years of work experience writing and implementing management plans for the habitat of **protected matters**,

b) has implemented and reported on management plans for the habitat of **koala**, **Grey-headed Flying-fox** and **Greater Glider**, and can demonstrate the implementation of those plans achieved the desired **habitat quality** for habitat of **protected matters**, and

c) can give authoritative assessment and advice on offset management to improve the **habitat quality** of the habitat of **protected matters** using relevant protocols, standards, methods and/or literature.

Suitably qualified field ecologist (for the purpose of undertaking environmental surveys) means a person who has relevant professional qualifications and at least three (3) years of work experience designing and implementing surveys for **Koala**, **Grey-headed Flying-fox** and **Greater Glider**, and can give an authoritative assessment and advice on the presence of **Koala**, **Grey-headed Flying-fox** and **Greater Glider** using relevant protocols, standards, methods and/or literature.

Vegetation Clearing and Fauna Management Plan means the *Vegetation Clearing & Fauna Management Plan*, Saunders Havill Group 2023, or the latest subsequent version revised in accordance with these conditions.

Website means a set of related web pages located under a single domain name attributed to the approval holder and available to the public.

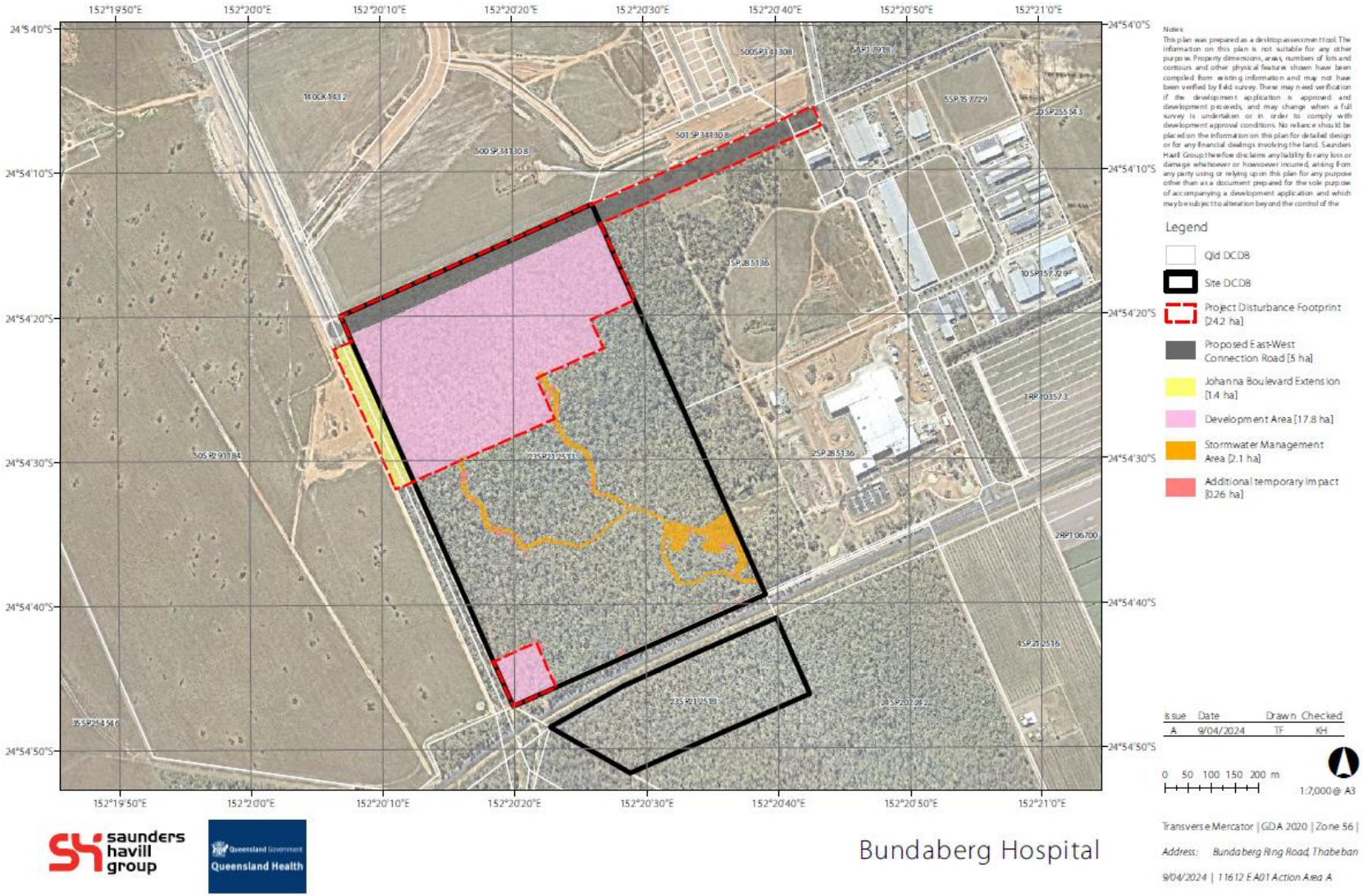
Wildlife expert means a person, such as a veterinarian, who practices in, and holds current qualifications for, caring for injured wildlife, and has access to adequate equipment to provide appropriate care.

Wildlife Management Report means the document to be prepared by the **Fauna Spotter Catcher** post construction, as described in the **Matters of National Environmental Significance Management Plan**.

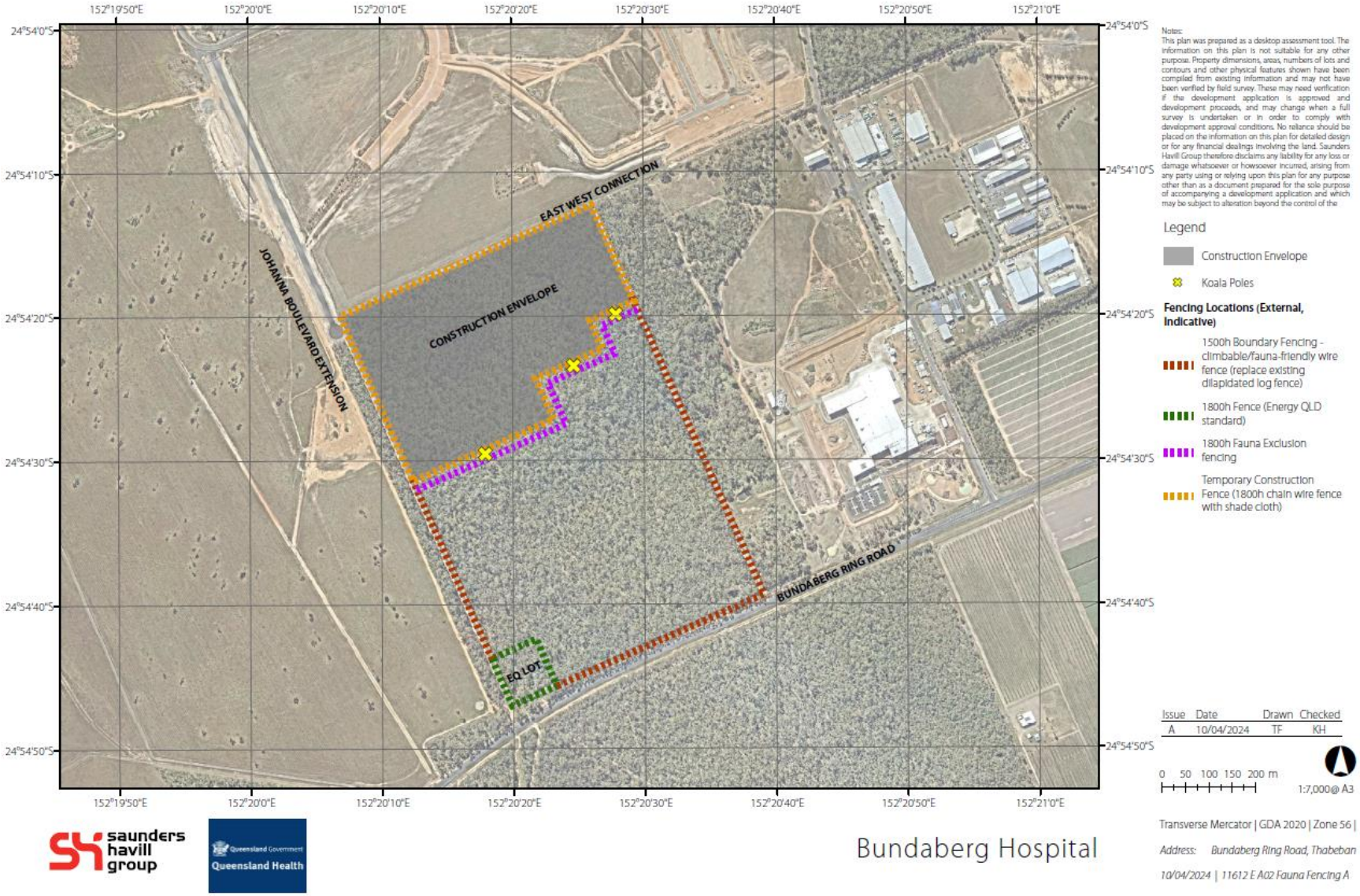
Appendices

1) Appendix A1 – Action Area
2) Appendix A2 – Fauna Fencing Plan
3) Appendix A3 – Rehabilitation Completion Criteria
4) Appendix A4 – BioCondition Benchmarks (downloaded 8 March 2024)
5) Appendix A5 – Rehabilitation Plan

Appendix A1 – Action Area



Appendix A2 – Fauna Fencing Plan



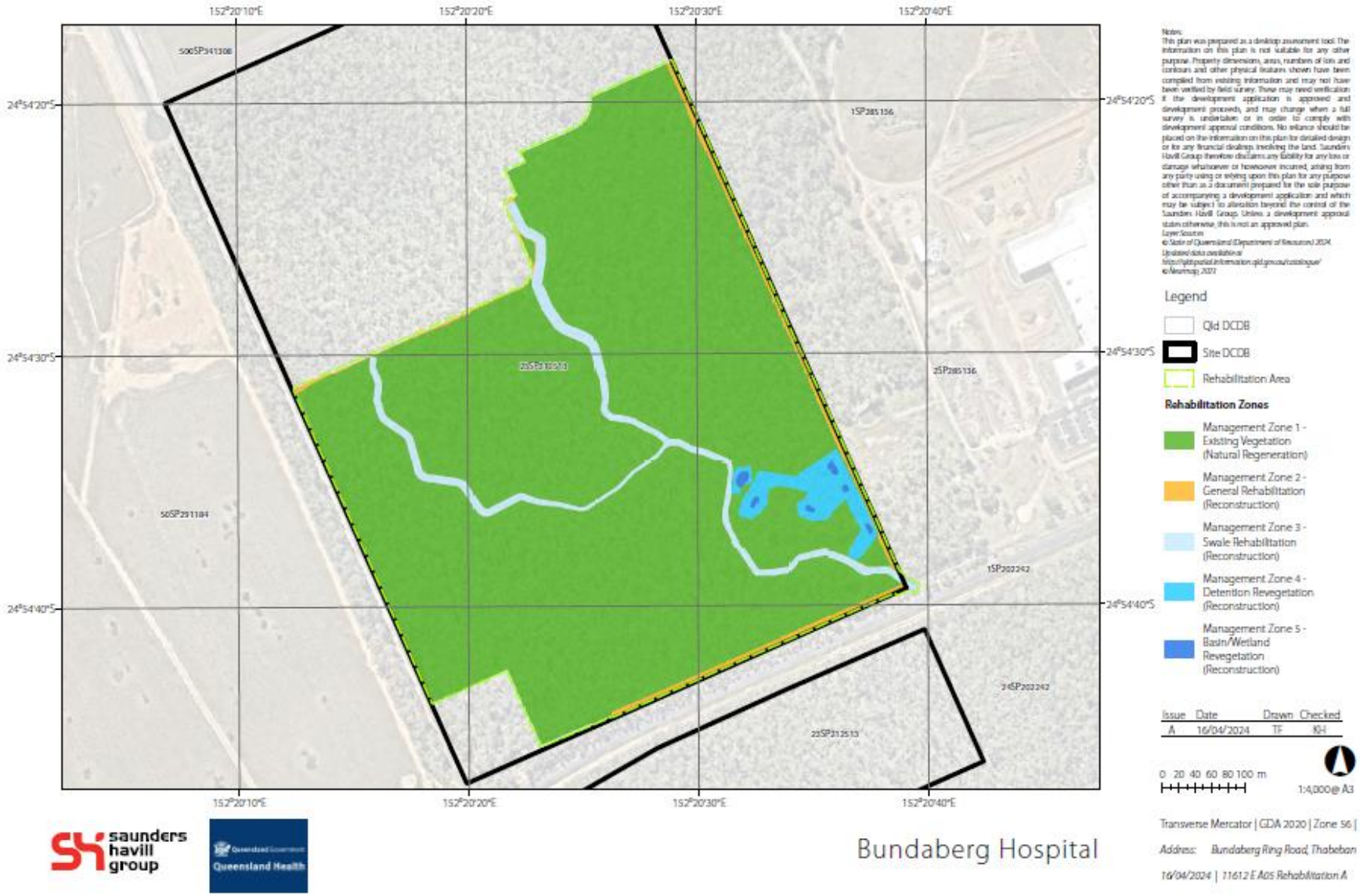
Appendix A3 – Rehabilitation Completion Criteria

Timing	Preliminary Completion Criteria
Year 1	Establish photo point monitoring and protocols.
Year 1 – 5	Complete treatment within the retained bushland as per the detailed Rehabilitation Management Plan. Monitor and maintain the treated rehabilitation management areas on a bi-monthly basis. Report in each relevant annual report the extent of rehabilitation management undertaken within the treatment zones.
Year 6 – 10	Monitor and maintain the treated rehabilitation management areas. Report in each relevant annual report the extent of rehabilitation management undertaken within the stratified treatment zones.
Year 10	Report on results/progress of rehabilitation within the Year 10 annual report including a detailed review of the effectiveness of restoration procedures applied and adaptive management changes for future implementation.
Year 20	Vegetation status to reach 50% of the reference benchmark cover (for canopy, shrub and ground-layers) and 70% of the reference benchmark height (for canopy and shrub layers) of the appropriate RE, which meets the definition of 'remnant vegetation' under the Vegetation Management Act 1999.

Appendix A4 – BioCondition Benchmarks

re_with_dec	description	max_score_exclude_landscape	recruitment	nn_plant_cover	tree_sp_richness	shrub_sp_richness	grass_sp_richness	forb_other_sp_richness	emergent_canopy_height	tree_canopy_height	tree_subcanopy_height	emergent_canopy_cover	tree_canopy_cover	tree_subcanopy_cover	Large tree threshold _Eucalypt	Large tree threshold_ Non eucalypt	tot_num_large_trees_euc_ha	tot_num_large_trees_non_euc_ha	shrub_canopy_cover	native_per_grass	litter_grd_cov	woody debris_length_ha	notes/conditions of use
12.5.4	Eucalyptus latisinensis +/- Corymbia intermedia, C. trachyphloia subsp. trachyphloia, Angophora leiocarpa, Eucalyptus exserta woodland. Other characteristic species include Eucalyptus siderophloia, Lophostemon suaveolens, Melaleuca viridiflora var. viridiflora, M. quinquenervia, M. cheelii and Grevillea banksii. Patches of Allocasuarina luehmannii or Banksia oblongifolia present locally and Xanthorrhoea johnsonii common in ground layer.	80	100	0	5	9	7	18	na	17	8	na	37	14	42	na	27	na	19	42	29	416	

Appendix A5—Rehabilitation Plan



Attachment B

Referral Decision (EPBC 2022/09397)

Australian Government
Department of Climate Change, Energy, the Environment and Water

Notification of referral decision and designated proponent – controlled action

New Bundaberg Hospital, Thabeban, Queensland (EPBC 2022/09397)

This decision is made under section 75 and section 87 of the Environment Protection and Biodiversity Conservation Act *1999* (EPBC Act).

Proposed action

designated proponent	Department of Health Qld ABN/ACN: 66329169412
proposed action	To construct and operate the new Bundaberg Hospital and associated infrastructure in Thabeban, Queensland (See EPBC Act referral 2022/09397)

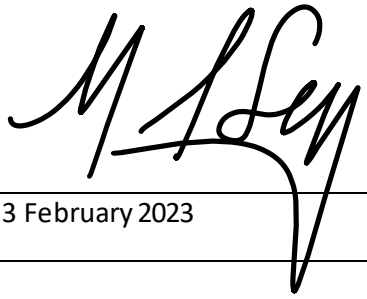
Referral decision: controlled action

status of proposed action	The proposed action is a controlled action. The project will require assessment and approval under the EPBC Act before it can proceed.
relevant controlling provisions	• Listed threatened species and communities (sections 18 & 18A)

Assessment approach decision

assessment approach	The project will be assessed by preliminary documentation

Person authorised to make decision

name and position	Mark Say, Acting Branch Head, Environmental Assessments Queensland and Sea Dumping Branch
signature	
date of decision	3 February 2023

Attachment C

Flora and Fauna lists

Flora Species List Table

Scientific Name	Common Name	Native/Introduced
Ageratum houstonianum	Blue Billygoat	Introduced
Bidens pilosa	Cobbler's Pegs	Introduced
Brachiaria decumbens	Signal Grass	Introduced
Conyza sumatrensis	Tall Fleabane	Introduced
Crotalaria lanceolata	Rattlepod	Introduced
Cuphea carthagenensis	Columbian Waxweed	Introduced
Desmodium intortum	Greanleaf Desmodium	Introduced
Emilia sonchifolia	Emila	Introduced
Lantana camara	Lantana	Introduced
Macroptilium atropurpureum	Siratro	Introduced
Macroptilium lathyroides	Phasey Bean	Introduced
Megathyrsus maximus	Guinea Grass	Introduced
Ochna serrulata	Ochna	Introduced
Passiflora foetida	Stinking Passionfruit	Introduced
Passiflora suberosa	Corky Passionflower	Introduced
Praxelis clematidea	Praxelis	Introduced
Richardia brasiliensis	White Eye	Introduced
Sida cordifolia	Flannel Weed	Introduced
Solanum seaforthianum	Brazillian Nightshade	Introduced
Solanum torvum	Devil's Fig	Introduced
Sporobolus pyramidalis	Giant Rat's Tail Grass	Introduced
Stachytarpheta cayennensis	Blue Snake Plant	Introduced
Urena lobata	Urena Burr	Introduced
Acacia disparrima	Hickory Wattle	Native
Acacia flavescens	Yellow Wattle	Native
Acacia leiocalyx	Early-flowering Black Wattle	Native
Allocasuarina littoralis	Black She-oak	Native
Alphitonia excelsa	Soap Tree	Native
Angophora leiocarpa	Smooth-bark Apple	Native
Bothriochloa macra	Red-leg Grass	Native
Cheilanthes distans	Bristle Cloak Fern	Native
Convolvulus angustissimus	Slender Binweed	Native
Corymbia henryii	Large-leaved Spotted Gum	Native
Corymbia intermedia	Pink Bloodwood	Native
Corymbia trachyphloia	Brown Bloodwood	Native
Cupaniopsis anacardioides	Tuckeroo	Native
Cymbopogon refractus	Barbed-wire Grass	Native
Desmodium rhytidophyllum	Hairy Trefoil	Native
Dianella caerulea	Blue Flax-lilly	Native
Dianella longifolia	Pale Flax-lilly	Native
Dichondra repens	Kidneyweed	Native
Entolasia stricta	Wiry Panic	Native
Eragrostis brownii	Brown's Love Grass	Native
Eriachne pallescens	Wanderrie grass	Native
Eriachne pallescens	Wanderrie Grass	Native
Eucalyptus exserta	Queensland Peppermint	Native
Eucalyptus latisinensis	White Mahogany	Native

Eucalyptus siderophloia	Northern Grey Ironbark	Native
Eucalyptus tereticornis	Forest Red Gum	Native
Ficus coronata	Sandpaper Fig	Native
Flindersia brayleyana	Queensland Maple	Native
Gahnia aspera	Saw Sedge	Native
Geitonoplesium cymosum	Scrambling Lilly	Native
Geodorum densiflorum	Sherperd's Crook Orchid	Native
Glycine clandestina	Slender Glycine	Native
Goodenia hederacea	Forest Goodenia	Native
Goodenia rotundifolia	Star Goodenia	Native
Greveilla banksii	Dwarf Banksia	Native
Imperata cylindrica	Blady Grass	Native
Jagera pseudorhus	Foambark	Native
Leptospermum polygalifolium	Wild May	Native
Lobelia purpurascens	White Root	Native
Lomandra multiflora	Many-flowered Matrush	Native
Lophostemon suaveolens	Swamp Box	Native
Melaleuca quinquenervia	Broad-leaved Paperbark	Native
Oplismenus aemulus	Basket Grass	Native
Panicum decompositum	Native Millet	Native
Parsonsia straminea	Monkey Rope	Native
Stephania joponica	Tape Vine	Native
Themeda triandra	Kangaroo Grass	Native
Trema tomentosa	Posion Peach	Native
Xanthorrhoea johnsonii	Grass tree	Native

Fauna Species List Table

Scientific Name	Common Name	Native/Introduced	Observation Method
Canis sp.	Wild Dog or Dingo	Introduced	Spotlighting
Rhinella marina	Cane toad	Introduced	Spotlighting
Accipiter fasciatus	Brown Goshawk	Native	Incidental
Aquila audax	Wedge-tailed Eagle	Native	Incidental
Ardea pacifica	White-necked Heron	Native	Incidental
Artamus leucorynchus	White-breasted Woodswallow	Native	Incidental
Centropus phasianinus	Pheasant Coucal	Native	Incidental
Cincloramphus timoriensis	Tawny Grassbird	Native	Incidental
Colluricincla harmonica	Grey Shrike-thrush	Native	Incidental
Coracina novaehollandiae	Black-faced Cuckoo-shrike	Native	Incidental
Corvus orru	Torresian Crow	Native	Incidental
Cracticus nigrogularis	Pied Butcherbird	Native	Incidental
Cracticus tibicen	Australian Magpie	Native	Incidental
Dacelo novaeguineae	Laughing Kookaburra	Native	Incidental
Dicrurus bracteatus	Spangled Drongo	Native	Incidental
Elanus axillaris	Black-shouldered Kite	Native	Incidental
Eopsaltria australis	Eastern Yellow Robin	Native	Incidental
Eurostopodus mystacalis	White-throated Nightjar	Native	Spotlighting and incidental
Geopelia placida	Peaceful Dove	Native	Incidental
Gerygone olivacea	White-throated Gerygone	Native	Incidental
Grallina cyanoleuca	Magpie-lark	Native	Incidental
Hirundo neoxena	Welcome Swallow	Native	Incidental
Lampropholis delicata	Garden Skink	Native	Incidental
Macropus giganteus	Eastern Grey Kangaroo	Native	Incidental and Camera trap
Malurus cyaneus	Superb Fairy-wren	Native	Incidental
Manorina melanocephala	Noisy Miner	Native	Incidental
Meliphaga lewinii	Lewin's Honeyeater	Native	Incidental
Melithreptus albogularis	White-throated Honeyeater	Native	Incidental
Merops ornatus	Rainbow Bee-eater	Native	Incidental
Pachycephala rufiventris	Rufous Whistler	Native	Incidental
Pardalotus striatus	Striated Pardalote	Native	Incidental
Petaurus breviceps	Sugar Glider	Native	Spotlighting
Petaurus norfolcensis	Squirrel Glider	Native	Spotlighting
Phaps chalcoptera	Common Bronzewing	Native	Incidental
Philemon corniculatus	Noisy Friarbird	Native	Incidental
Podargus strigoides	Tawny Frogmouth	Native	Spotlighting
Taeniopygia bichenovii	Double-barred Finch	Native	Incidental
Threskiornis molucca	Australian White Ibis	Native	Incidental
Trichoglossus chlorolepidotus	Scaly-breasted Lorikeet	Native	Incidental
Trichoglossus moluccanus	Rainbow Lorikeet	Native	Incidental
Trichosurus vulpecula	Common Brushtail Possum	Native	Spotlighting
Wallabia bicolor	Swamp Wallaby	Native	Incidental and Camera trap
Zosterpos lateralis	Silvereye	Native	Incidental

Attachment D

VCFMP

Plan ref: 11612 E VCFMP A
Date: 01 November 2023

Vegetation Clearing & Fauna Management Plan

Economic Development Queensland (EDQ) / Bundaberg Regional Council (BRC)

Bundaberg Hospital

Queensland Government
Queensland Health

CONTENTS

SHG Contact

Ms Madeline Dooley
Email: mail@saundershavill.com

saunders havill group

1:5,500

Bundaberg Ring Road, Thabeban

Vegetation Clearing and Fauna Management Plan - *Notes*

Introduction

The Environmental Management Division of the **Saunders Havill Group (SHG)** was engaged by **Queensland Health** to prepare a Vegetation Clearing and Fauna Management Plan (VCFMP) for the proposed Bundaberg Hospital site at Lot 23 Bundaberg Ring Road, Thabeban, QLD, 4670 (Lot 23 on SP212513).

The purpose of this plan is to manage the vegetation removal process and the protection of fauna species within the disturbance area. This VCFMP has been prepared for Bundaberg Regional Council (BRC)/Economic Development Queensland (EDQ) and is required to be approved prior to clearing works commencing. The clearing works will follow general principles for vegetation clearing documented on this sheet and *Sheet 3*, and all Council/EDQ specific requirements.

This VCFMP has been produced by overlaying the following site datasets to determine impacts and disturbance on existing vegetation:

1. Tree data including specimen details & features (RPS, 2023)
2. Site Inspection of Existing Vegetation (RPS, 2023)
3. Site Layout Plans (Stantec, 2023)
4. Arborist inspection (TBD)

Project Management

Vegetation management and processes are an integral part of the construction and operational works phases. The site supervisor is responsible for all onsite works including overseeing vegetation clearing, health and safety of fauna and adhering to Council's / EDQ's conditions and guidelines and Australian Standards - Protection of Trees on Development Sites AS4970-2009 and Pruning of Amenity Trees AS4373-1996.

When required, the project arborist (with minimum AQF Level 5 in Arboriculture and minimum 5 years' experience) is responsible for: undertaking all appropriate arboricultural measures prior to the commencement of any earthworks on site to ensure the survival and long-term health of existing trees to be retained. These measures may include soil decompaction, soil aeration, fertilising, mulching, watering, root or crown reduction and hazard reduction or as otherwise determined by the arborist. The site arborist is also required to direct and supervise all works within TPZs of trees to be retained, and perform arboricultural care requirements where necessary.

The roles and responsibilities of the Fauna Spotter-catcher are provided on *Sheet 3*.

Site Contacts

Site and consulting contacts for queries relating to vegetation clearing include:

Client Contact:
Queensland Health

Site Contractor:
To be advised

Site Fauna spotter-catcher:
To be advised
(Refer to *Sheet 3* for responsibilities)

Environmental Contact:
Saunders Havill Group
E: mail@saundershavill.com

Site Arborist:
To be advised

Site Bushfire Consultant:
To be advised

Clearing Phases and Process

PHASE 1 - Tree Protection Fencing to be installed

Fencing to be installed prior to the commencement of any clearing works on the site. Tree protection fencing to be located at or beyond 12 x diameter at breast height (DBH) (AS4970-2009 Protection of trees on development sites)—unless approved by the appointed arborist. Signs identifying the tree retention area as a 'no go zone' to be installed at regular intervals along tree protection fencing.

PHASE 2 - Council Pre-start Meeting (if required by Council/EDQ)

Fencing shall be in place at the time of the official pre-start meeting for inspection and sign off by Council/EDQ Officers.

PHASE 3 - Fauna Inspections and Management

Undertake necessary fauna management requirements prior to clearing works - as a minimum, this should include the specifications listed on *Sheet 3*, and acknowledge specific Council/EDQ approval requirements.

PHASE 4 - Undertake Bulk Clearing

Undertake wholesale removal of vegetation once approved for removal by a qualified fauna spotter and all necessary permits are obtained. Clearing will occur in the direction outlined in *Sheet 5* of this VCFMP, and managed by the appointed fauna spotter-catcher to allow all fauna to move unimpeded towards retained vegetation on, and adjacent to, the site.

Vegetation clearing techniques:

i. By utilising the most appropriate machinery and equipment during vegetation clearing, the probability of injury or death of wildlife during clearing can be significantly reduced or eliminated while still maintaining an efficient vegetation removal process.
ii. Suggested techniques are as follows: (a) a vertical tree grab attachment on an excavator (30 tonne) can be used to pull entire trees in size up to 30-40cm diameter at a height measured at 1.3 metres above ground level and lay them down in a steady controlled fashion, allowing inspection by a fauna spotter-catcher (b) where large trees are too large for a vertical tree grab and have been identified, an elevated work platform or where practical, cherry picker should be used in conjunction with a chainsaw operator and fauna spotter-catcher. Alternatively, careful removal of hollow section from habitat tree and gentle lowering for inspection by fauna spotter-catcher (c) the use of bulldozers to clear vegetation is limited to vegetation that has been thoroughly inspected by a fauna spotter-catcher and is found to contain no fauna or potential habitat. Bulldozers are not to be used to push over large trees that contain hollows or other habitat features.

NOTE: Dogs are not permitted onsite at any time during construction. Construction works including clearing must occur between the hours of 6.00am and 6.00pm.

Access and Stockpiling

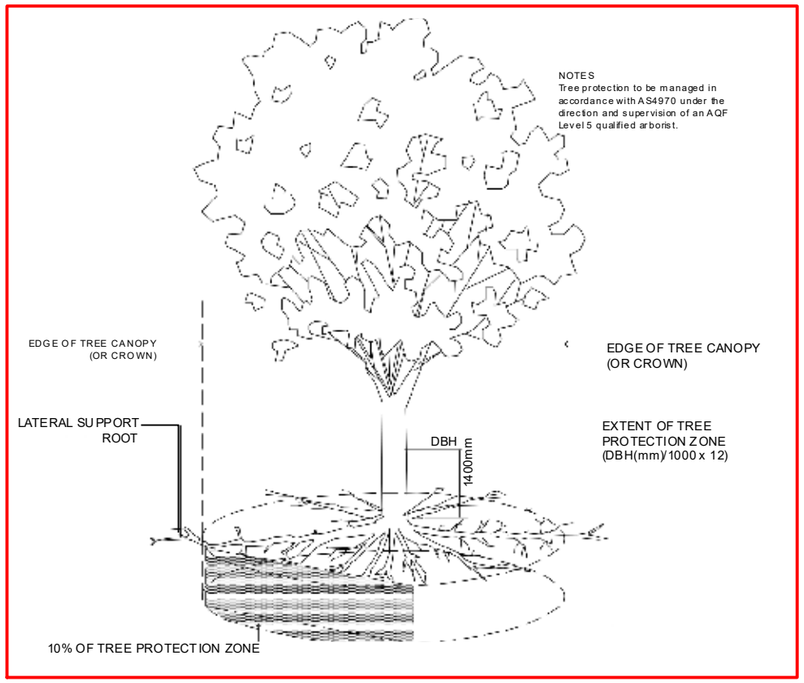
Vegetation stockpiling locations are to be designated in easily accessible areas outside of TPZs. Indicative vegetation stockpiling locations have been allocated within the clearing area, allowing for material to be easily delivered and stored. These locations are subject to minor change according to cut/fill activities and intended location for reuse.

Cleared vegetation free of weeds is to be reused on or off the project site. Recycling techniques include mulching, tub-grinding, wood chipping and salvage (e.g. custom milling). Trees with identified hollows should have the hollow section preserved and should be suitably mounted on nearby or adjacent suitable trees.

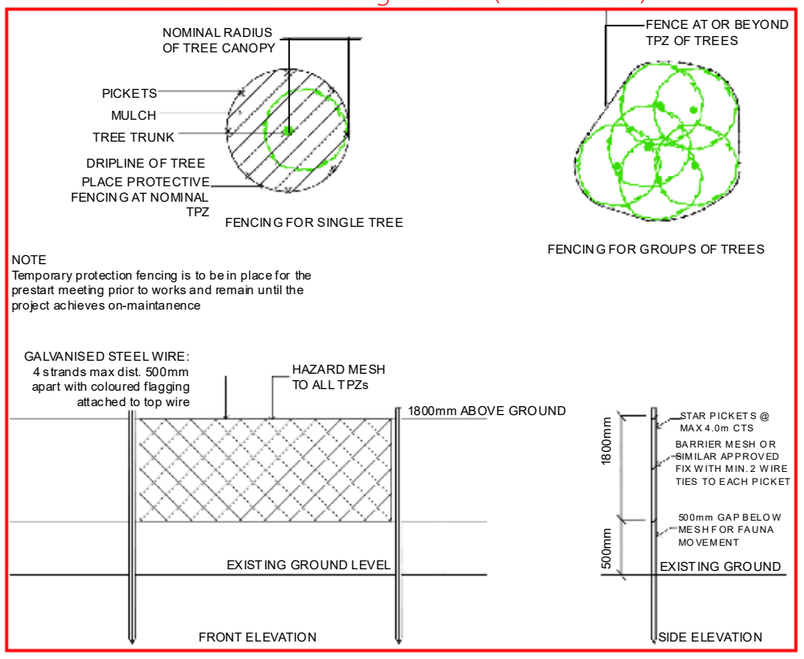
Maintenance

After tree clearing works on site, an analysis of the vegetation's health and growth should be undertaken by the project arborist to determine specific maintenance needs. Follow-up maintenance works should be carried out on retained vegetation where required. If conditioned in the approval—the project arborist may be required to submit a report to Council/EDQ detailing the measures undertaken during the construction period and any further work required post this period.

Tree Protection Zone - Detail (not to scale)



Tree Protection Fencing - Detail (not to scale)



saunders havill group

Client: Queensland Health

References:
AS4970-2009 Protection of trees on development sites

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

Project: Bundaberg Ring Road, Thabeban

environmental management

Plan of: Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E02 VCFMP A		

Bundaberg Ring Road, Thabeban

Vegetation Clearing and Fauna Management Plan - *Notes*

Introduction

The Fauna Management specification on this *VCFMP* is designed to protect native animals and control/manage impacts during the vegetation clearing works. The clearing area occurs within the northern and south-western sections of the site. The site abuts cleared land and active construction zones to the north and west, Bundaberg Ring Road to the south, and a brewery and other industrial land uses to the west. Common species associated with semi-urban landscapes were spotted at the clearing area during the field assessment. The fauna management specifications and principles incorporated in this *VCFMP* apply generically to all native animals and focus on avoiding conflicts and incorporating measures to minimise disturbance. Compliance with this section of the *VCFMP* is compulsory and incorporates the use of expert consultants including a Fauna Spotter (holding a valid Wildlife Rehabilitation Permit issued by the **Department of Environment and Science**). The management protocols outlined in the following section can vary at the site, as determined by the registered fauna spotter catcher or arborist.

Fauna Impacts

Clearing of vegetation provides an obvious source of impact to existing habitat and animal safety. More specifically the existing vegetation provides habitat, movement and protection opportunities for some fauna through both regrowth and canopy trees. These opportunities may be altered during and post vegetation clearing works. Potential impacts include:

Construction Impacts

- Direct removal of site vegetation
- Loss of habitat
- Noise, vibration and dust
- Erosion and sedimentation
- Threats associated with open cuts etc. and fauna entrapment
- Loss of food sources
- Excavation/compaction/changes in ground levels
- Altering hydrological flows
- Fragmentation of habitat

Operational Impacts

- Weed introduction (garden escapees)
- Increased hydrology with increased hardstand
- Altering of run-off chemical and nutrient components (quality)
- Barriers to fauna movement
- Vehicles and pedestrian movement and trespass
- Introduction of domestic and predatory species

Fauna Management Schedule

Ref:	Management Item	Responsibility	Timing	Reporting
	1.0 Pre - Clearing			
1.1	**Temporary Fencing** Prior to the commencement of works and to be inspected by the site Environmental Coordinator and/or Project Arborist—Delineate areas where vegetation is proposed to be retained with exclusion fencing to prevent accidental felling. Clearing is to be undertaken in accordance with AS 4970-2009 Protection of Trees on Development Sites. ▪ Fencing shall be fauna friendly ▪ No clearing, stockpiling, site access, earthworks, storage, etc. is to occur within the temporary protection fencing. ▪ Only approved weed management works to occur within the temporary protection fencing ▪ Fencing to be reinstated immediately if damaged or knocked down, any damage to retained trees to be immediately reported to Project Arborist. ▪ Fencing to remain until the completion of all site works.	Site Supervisor	Prior to the commencement of clearing	Inspected by Council / EDQ and Project Arborist
1.2	**Contractor Education & Awareness** All site contractors and subcontractors will be made aware of their responsibilities to protect native fauna. The Fauna Management notes on this VCFMP are provided as a working document to assist on-site management and protection of native animals. This generally will form part of education and training on a broader work place health and safety but as a minimum will include: ▪ Copy of VCFMP kept on-site (Site Office). ▪ General education and awareness notification of contractors and sub-contractors involved in activities potentially impacting native animals as part of site induction – contractors must know the location of the VCFMP, key phone numbers and who to report to if they breach the VCFMP. ▪ A list of relevant contact phone numbers as listed on these drawings is kept in a visible and accessible location in the site office.	Site Supervisor / The Proponent	Prior to the commencement of clearing and as part of the site induction for new staff and sub-contractors	Site Supervisor
1.3	**Fauna Spotter-Catcher / Relocator** Immediately prior to the commencement of clearing of native vegetation, a daily visual inspection of the area must be carried out by a qualified fauna spotter-catcher holding a valid Rehabilitation Permit from the relevant State Government Agency. The fauna spotter-catcher should clearly flag vegetation found to contain fauna or fauna habitat (such as tree hollows, arboreal termite mounds, stick nests or possum drays with flagging tape and verbally communicate this information to the tree feller to ensure flagged trees are not felled until authorised by the fauna manager.	Site Supervisor	Prior to the commencement, of clearing	Inspected by the Fauna Spotter-catcher
	2.0 Vegetation Clearing			
2.1	**Fauna Spotter-Catcher / Relocator** The qualified fauna spotter-catcher is to be present on site during all clearing operations to supervise and direct clearing works, and to respond to any situations that may arise in relation to fauna. In the event of an animal being located, a suitable buffer area (as determined by the fauna spotter-catcher) should be established around the animal's location that excludes machinery until it has relocated at its own accord (usually overnight). If an animal requires relocating this must be undertaken by a suitable qualified fauna expert recognized by the **Department of Environment & Science**. For some fauna, specific permit requirements may apply. If vegetation is left stockpiled for more than 12 hours or overnight, the fauna spotter-catcher must inspect the vegetation prior to chipping or removal from site. The Fauna Spotter-catcher will manage the care of any injured or orphaned wildlife (e.g. veterinary attention or delivery to a wildlife carer). Any native fauna listed as a threatened species under the Nature Conservation Regulation 2020 that are injured or orphaned by the development process, must be reported to the **Department of Environment & Science** (1300 130 372). Any other injured or orphaned fauna must be reported through the Rehabilitation Permit return process by the Fauna Spotter-catcher. The Site Supervisor is responsible for the safe management of site fauna and implementation of these specific fauna requirements.	Site Supervisor	During / post clearing	Inspected by the Fauna Spotter-catcher
2.2	**Specific Koala Management Notes** A Koala/Fauna spotter-catcher is a person who holds a valid Rehabilitation Permit from the relevant State Government Agency, and has either a tertiary qualification in Biology or Zoology, or who is demonstrably experienced in the identification and location of Koalas in their natural habitat. For example, a koala keeper employed by a licensed Wildlife exhibitor (i.e. a zoo) may be capable of demonstrating competence in locating Koala's. Prior to the commencement and during felling operations, it is the responsibility of the Koala spotter to be present at the site of felling operations identify any tree at the site within which a Koala is present, as well as any tree that has a crown which is intermeshed or overlapping with such a tree; and advise the person who is authorised to conduct the felling operation, or that persons' representative, of the precise location of each such tree Management Item.	Site Supervisor	Prior to the commencement, and during clearing	Inspected by the Fauna Spotter-catcher

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Client: Queensland Health

References:
AS4970-2009 Protection of trees on development sites

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

Project: Bundaberg Ring Road, Thabeban

environmental management

Plan of: Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF

Drawing No.: 11612 E03 VCFMP A

Vegetation Clearing and Fauna Management Plan - *Notes cont.*

2.0 Vegetation Clearing (cont.)				
2.3	**Clearing Pattern / Fauna Flushing** Clearing occurs once the fauna spotter-catcher gives sign off the site is clear of all native species and all necessary permits are obtained. The intended clearing direction is towards retained vegetation. Clearing direction is subject to amendment by the fauna spotter-catcher. At the completion of operational works, and prior to the sealing of survey plans for the relevant stage, the fauna spotter-catcher must provide certification to Council / EDQ officers that all works were undertaken in accordance with these fauna management requirements and specific Council/EDQ requirements.	Site Supervisor	Prior to the commencement, and during clearing	Inspected by the Fauna Spotter-catcher
2.4	**Specific Habitat Tree Notes** Where possible, clearing of habitat trees is to be avoided during late winter and spring (typically July – October) when many native birds are actively nesting/have young in nests and arboreal mammals have dependent and/or pouch young.	Site Supervisor	Prior to the commencement, and during clearing	Inspected by the Fauna Spotter-catcher
2.5	**Hollow / Habitat Feature Salvage Notes** Hollows and other habitat features such as large fallen logs, log piles, rock piles or outcrops may provide important refuges / protection for fauna within bushland and open space areas near the development site. There are currently no regulatory guidelines in Queensland for the salvage and reinstallation of hollows and habitat features at development sites. The information below has been extracted from nest box installation material provided by MBRC, Redland and Ipswich City Council, and "Nest boxes for wildlife, a practical guide" by Alan and Stacey Franks (2015). The salvage and reinstallation of hollows and habitat features is to be undertaken by / or under the supervision and direction of a suitably qualified fauna spotter-catcher or arborist, and in accordance with these guidelines. The reinstallation of hollows and habitat features is required to comply with the bushfire management requirements of the receiving area. **Salvage from clearing area:** ▪ Hollows should only be salvaged in circumstances where clearing of habitat trees cannot be avoided. ▪ Habitat or hollow-bearing trees are to be felled last and cleared using special plant and equipment aimed at reducing the risk of death or injury to occupying fauna ▪ Donor habitat tree particulars to be documented by the suitably qualified fauna spotter-catcher or arborist prior to salvage—including but not limited to tree species, height and diameter at breast height (DBH), height above ground and aspect of hollow, any other significant features. ▪ Hollow / habitat feature sections from each identified habitat tree to be carefully removed by, or under direction and supervision of a suitably qualified fauna spotter-catcher or arborist. All additional trees to be inspected on ground to ensure all habitat features are salvaged from the clearing area. ▪ Additional habitat features, such as site logs and rock should be inspected by the fauna spotter-catcher prior to relocation. **Reinstallation at receiving area:** ▪ Hollows are to be salvaged and reinstalled at a suitable receiving area within an environmental area onsite, or as close to the site as possible. ▪ The salvaged hollow is to be reinstalled in a similar tree specimen, and at a similar height and aspect as the donor tree where it is practical and safe to do so. ▪ As a general rule, salvaged hollows should be positioned: o in a tree species preferred by the target fauna species. For example, Phascogales prefer rough-barked trees whereas Scaly-breasted Lorikeets prefer smooth-barked or dead trees o at a location in the receiving tree to meet the target species requirements o high enough in the receiving tree to reduce the chances of predation by introduced fauna species, and out of reach of humans. Greater than 4 metres (12 feet) above ground level is recommended to minimise predation from cats o away from potential edge effects to further mitigate feral uptake o where they can be easily inspected/maintained o away from bright lights o in a direction that is protected from severe storms and / or prevailing winds. A north-east to south-east aspect is preferred by many species o in a location that is shaded during the hottest parts of the day. o Where they are least vulnerable to branch fall o level with a tree branch to provide easy access for fauna o firmly mounted with least impact to the tree ▪ If not practical or safe to install a tree hollow / habitat feature in a tree at the receiving area, it should be positioned on ground providing there are no conflicts with bushfire requirements at the receiving area. Other habitat features may be strategically positioned at the receiving area to optimise habitat and movement opportunities for fauna. Where possible, rocks and log material should be piled to increase habitat values.	Site Supervisor	Prior to the commencement/ and during clearing	Fauna spotter-catcher or arborist

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Client:
Queensland Health

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References:
AS4970-2009 Protection of trees on development sites

Amendments:

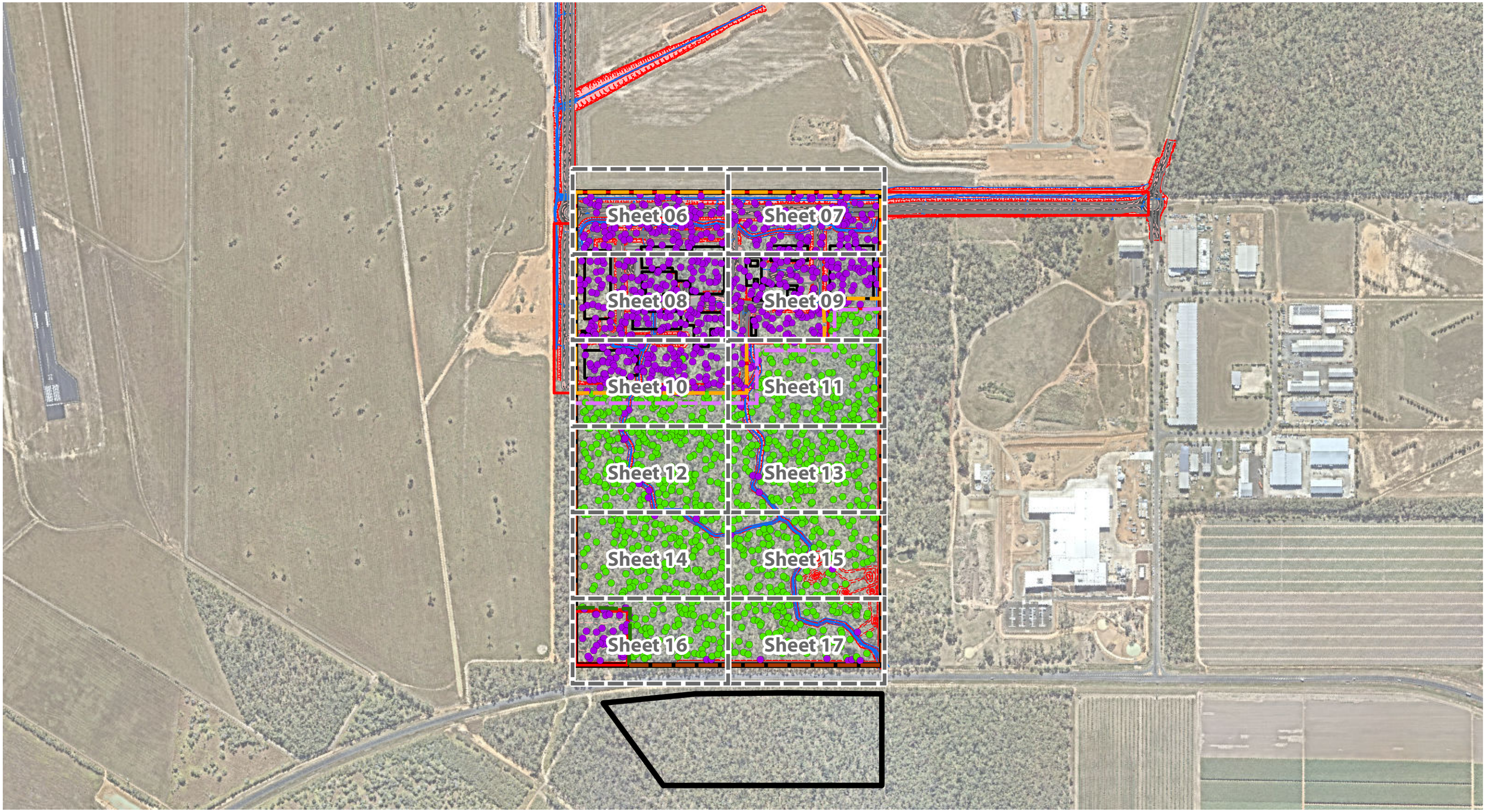
Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

Project:
Bundaberg Ring Road, Thabeban

environmental management

Plan of:
Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E04 VCFMP A		



RPS Tree Plot

- Tree to retain
- Tree to retain subject to detailed stormwater design
- Tree to remove

- Disturbance Area

Engineering Detail

- Proposed Buildings
- Proposed Roads
- Proposed Footpaths
- Road and Footpath Detail
- Stage Boundaries
- Retaining Walls
- Stormwater Design
- Earthworks Batters
- Design Contours

Fencing Locations (External, Indicative)

- 1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)
- 1800h Fence (Energy QLD standard)
- 1800h Fauna Exclusion fencing
- Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet Context*

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Client:
Queensland Health

References:
Engineering drawing (Stantec, 2023)

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

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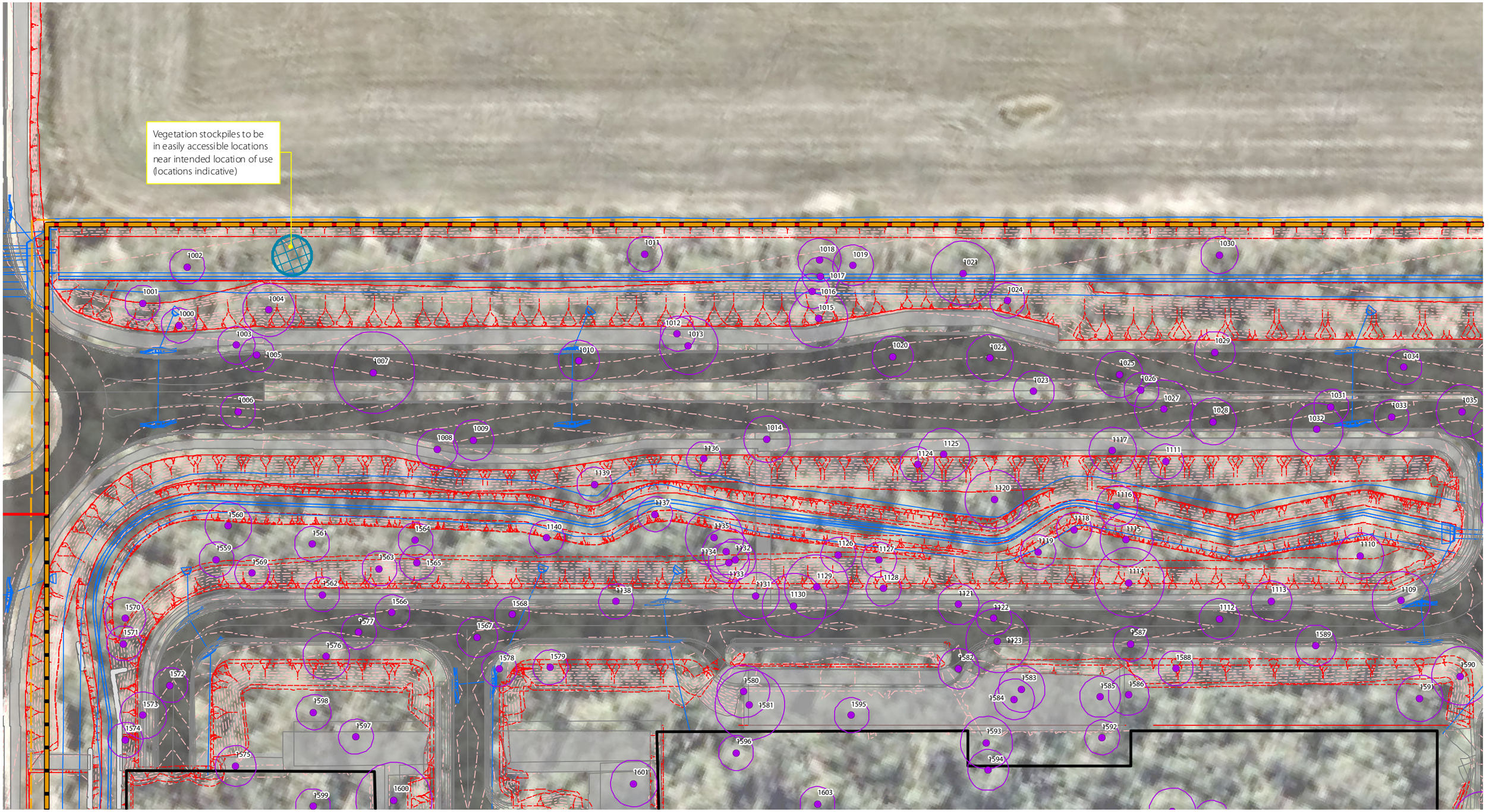
Project:
Bundaberg Ring Road, Thabeban

environmental management

Plan of:
Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E05 VCFMP A		



RPS Tree Plot (w/TPZ)

- Tree to retain
- Tree to remove

- Disturbance Area

Engineering Detail

- Proposed Buildings
- Proposed Roads
- Proposed Footpaths
- Road and Footpath Detail
- Stage Boundaries
- Retaining Walls
- Stormwater Design
- Earthworks Batters
- Design Contours

Fencing Locations (External, Indicative)

- 1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)
- 1800h Fence (Energy QLD standard)
- 1800h Fauna Exclusion fencing
- Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 06*

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Client:

Queensland Health

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References:

Engineering drawing (Stantec, 2023)

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

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Project:

Bundaberg Ring Road, Thabeban

environmental management

Plan of:

Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E06 VCFMP A		

RPS Tree Plot (w/TPZ)

- Tree to retain
- Tree to remove

- Disturbance Area

Engineering Detail

- Proposed Buildings
- Proposed Roads
- Proposed Footpaths
- Road and Footpath Detail
- Stage Boundaries
- Retaining Walls
- Stormwater Design
- Earthworks Batters
- Design Contours

Fencing Locations (External, Indicative)

- 1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)
- 1800h Fence (Energy QLD standard)
- 1800h Fauna Exclusion fencing
- Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 07*

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Queensland Health

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References:

Engineering drawing (Stantec, 2023)

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

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Project:

Bundaberg Ring Road, Thabeban

environmental management

Plan of:

Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E07 VCFMP A		

RPS Tree Plot (w/TPZ)

- Tree to retain
- Tree to remove

- Disturbance Area

Engineering Detail

- Proposed Buildings
- Proposed Roads
- Proposed Footpaths
- Road and Footpath Detail
- Stage Boundaries
- Retaining Walls
- Stormwater Design
- Earthworks Batters
- Design Contours

Fencing Locations (External, Indicative)

- 1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)
- 1800h Fence (Energy QLD standard)
- 1800h Fauna Exclusion fencing
- Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 08*

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Client:

Queensland Health

References:

Engineering drawing (Stantec, 2023)

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

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Project:

Bundaberg Ring Road, Thabeban

environmental management

Plan of:

Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E 08 VCFMP A		

Fauna exclusion fencing to be installed following clearing works to facilitate movement of wildlife towards fauna safe zones prior to / during clearing works.

Construction and exclusion fencing locations subject to change. Final on-ground extents to be determined by project Fauna spotter-catcher or qualified arborist.

RPS Tree Plot (w/TPZ)

- Tree to retain
- Tree to remove

Engineering Detail

- Disturbance Area
- Proposed Buildings
- Proposed Roads
- Proposed Footpaths
- Road and Footpath Detail
- Stage Boundaries
- Retaining Walls
- Stormwater Design
- Earthworks Batters
- Design Contours

Fencing Locations (External, Indicative)

- 1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)
- 1800h Fence (Energy QLD standard)
- 1800h Fauna Exclusion fencing
- Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 09*

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Client: Queensland Health

References:
Engineering drawing (Stantec, 2023)

Amendments:

Issue	Date	Description	Checked
A	1/1 1/2023	Client Draft	MD

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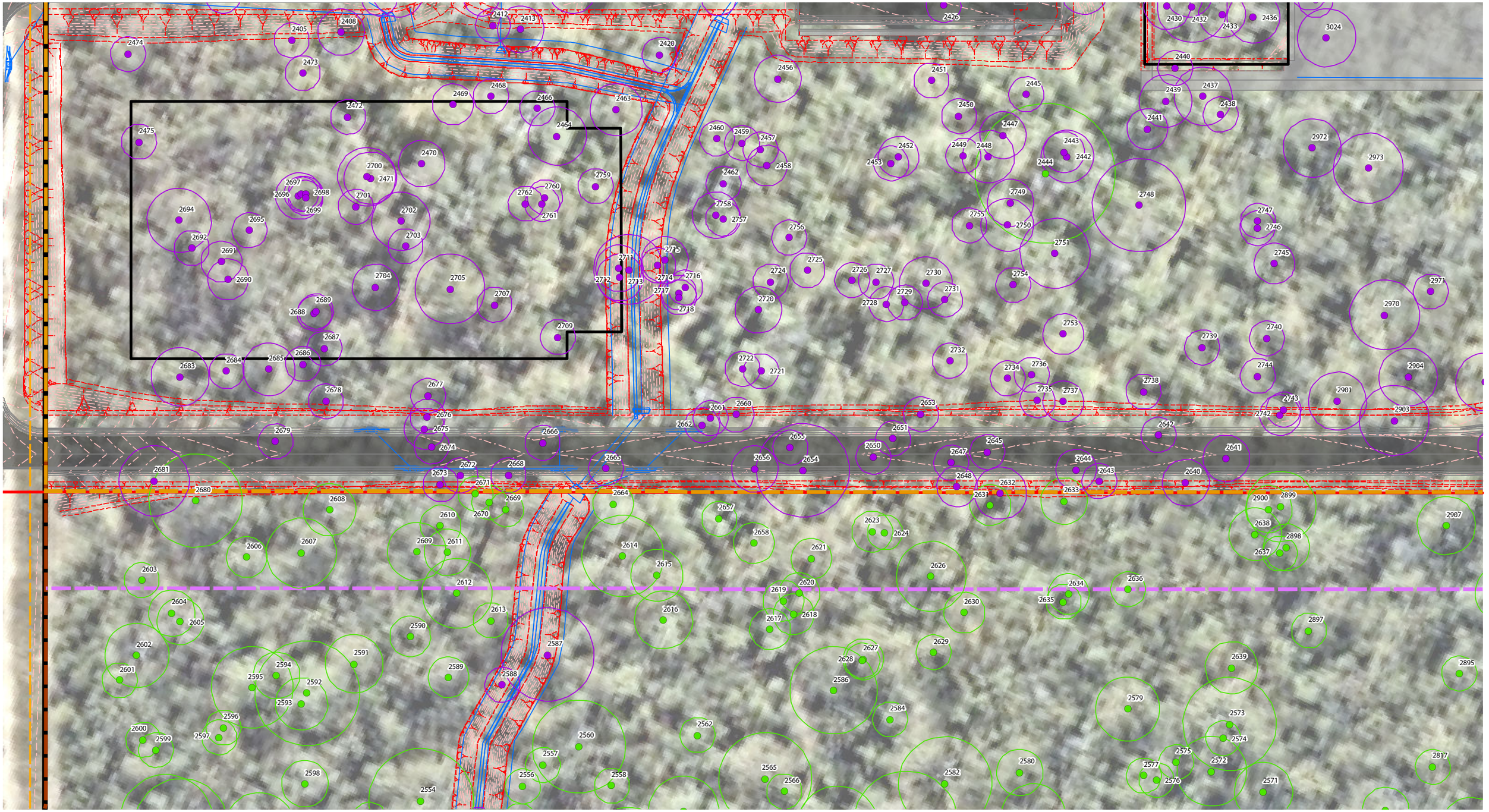
Project: Bundaberg Ring Road, Thabeban

environmental management

Plan of: Vegetation Clearing & Fauna Management Plan

Date:	1/1 1/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E09 VCFMP A		



RPS Tree Plot (w/TPZ)

- Tree to retain
- Tree to remove

- Disturbance Area

Engineering Detail

- Proposed Buildings
- Proposed Roads
- Proposed Footpaths
- Road and Footpath Detail
- Stage Boundaries
- Retaining Walls
- Stormwater Design
- Earthworks Batters
- Design Contours

Fencing Locations (External, Indicative)

- 1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)
- 1800h Fence (Energy QLD standard)
- 1800h Fauna Exclusion fencing
- Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 10*

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Client:

Queensland Health

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References:

Engineering drawing (Stantec, 2023)

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Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

Project:

Bundaberg Ring Road, Thabeban

environmental management

Plan of:

Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E10 VCFMP A		

Construction and exclusion fencing locations subject to change. Final on-ground extents to be determined by project Fauna spotter-catcher or qualified arborist.

RPS Tree Plot (w/TPZ)

- Tree to retain
- Tree to remove

- Disturbance Area

Engineering Detail

- Proposed Buildings
- Proposed Roads
- Proposed Footpaths
- Road and Footpath Detail
- Stage Boundaries
- Retaining Walls
- Stormwater Design
- Earthworks Batters
- Design Contours

Fencing Locations (External, Indicative)

- 1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)
- 1800h Fence (Energy QLD standard)
- 1800h Fauna Exclusion fencing
- Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 11*

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Client:
Queensland Health

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Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

Project:
Bundaberg Ring Road, Thabeban

environmental management

Plan of:
Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E11 VCFMP A		

RPS Tree Plot (w/TPZ)

- Tree to retain
- Tree to remove

- Disturbance Area

Engineering Detail

- Proposed Buildings
- Proposed Roads
- Proposed Footpaths
- Road and Footpath Detail
- Stage Boundaries
- Retaining Walls
- Stormwater Design
- Earthworks Batters
- Design Contours

Fencing Locations (External, Indicative)

- 1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)
- 1800h Fence (Energy QLD standard)
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- Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 12*

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Client: Queensland Health

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Amendments:

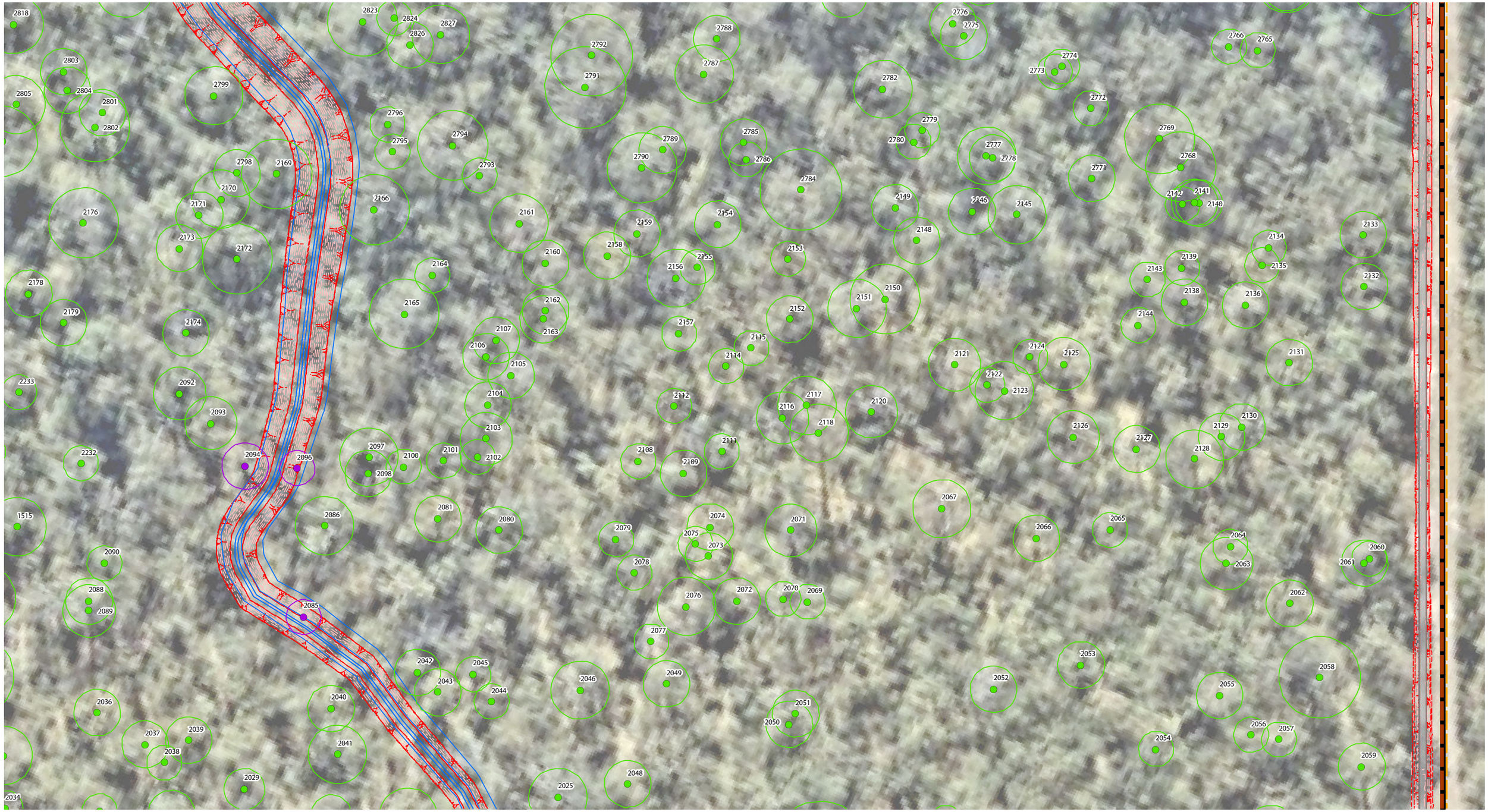
Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

Project: Bundaberg Ring Road, Thabeban

environmental management

Plan of: Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E12 VCFMP A		



RPS Tree Plot (w/TPZ)

- Tree to retain
- Tree to remove

- Disturbance Area

Engineering Detail

- Proposed Buildings
- Proposed Roads
- Proposed Footpaths
- Road and Footpath Detail
- Stage Boundaries
- Retaining Walls
- Stormwater Design
- Earthworks Batters
- Design Contours

Fencing Locations (External, Indicative)

- 1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)
- 1800h Fence (Energy QLD standard)
- 1800h Fauna Exclusion fencing
- Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 13*

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Client: Queensland Health

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Engineering drawing (Stantec, 2023)

0 5 10 20 30 40 50 m

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Amendments:

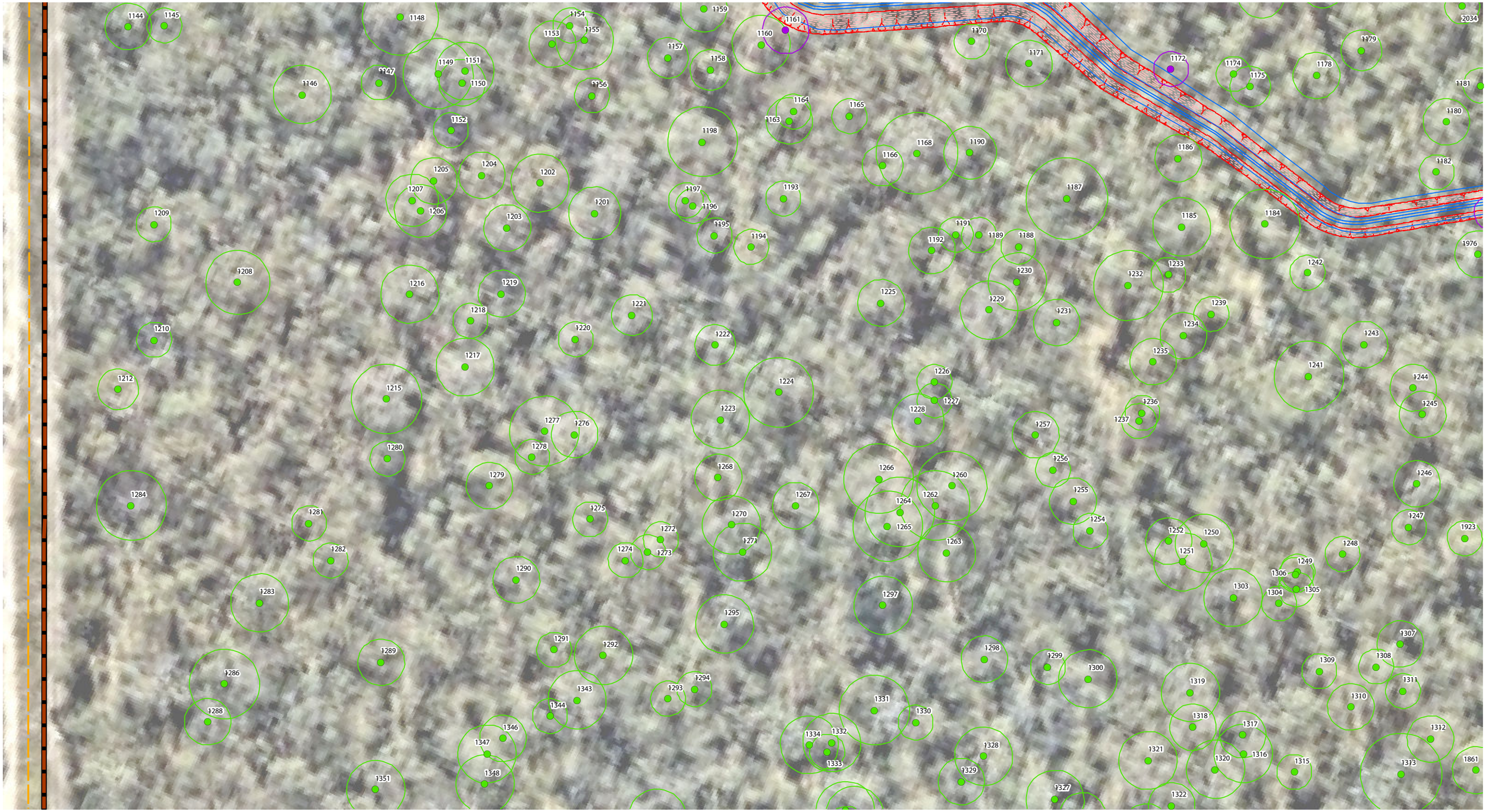
Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

Project: Bundaberg Ring Road, Thabeban

environmental management

Plan of: Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E13 VCFMP A		



RPS Tree Plot (w/TPZ)

Tree to retain

Tree to remove

Disturbance Area

Engineering Detail

Proposed Buildings

Proposed Roads

Proposed Footpaths

Road and Footpath Detail

Stage Boundaries

Retaining Walls

Stormwater Design

Earthworks Batters

Design Contours

Fencing Locations (External, Indicative)

1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)

1800h Fence (Energy QLD standard)

1800h Fauna Exclusion fencing

Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 14*

saunders havill group

Client:

Queensland Health

Disclaimer:

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References:

Engineering drawing (Stantec, 2023)

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

0 5 10 20 30 40 50 m

1:750 @ A3

Project:

Bundaberg Ring Road, Thabeban

environmental management

Plan of:

Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E14 VCFMP A		

Stormwater management swales and wetland design are based on preliminary design and may be subject to minor change.

RPS Tree Plot (w/TPZ)

Tree to retain

Tree to remove

Disturbance Area

Engineering Detail

Proposed Buildings

Proposed Roads

Proposed Footpaths

Road and Footpath Detail

Stage Boundaries

Retaining Walls

Stormwater Design

Earthworks Batters

Design Contours

Fencing Locations (External, Indicative)

1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)

1800h Fence (Energy QLD standard)

1800h Fauna Exclusion fencing

Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 15*

saunders havill group

Client:

Queensland Health

References:

Engineering drawing (Stantec, 2023)

0 5 10 20 30 40 50 m

1:750 @ A3

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

Project:

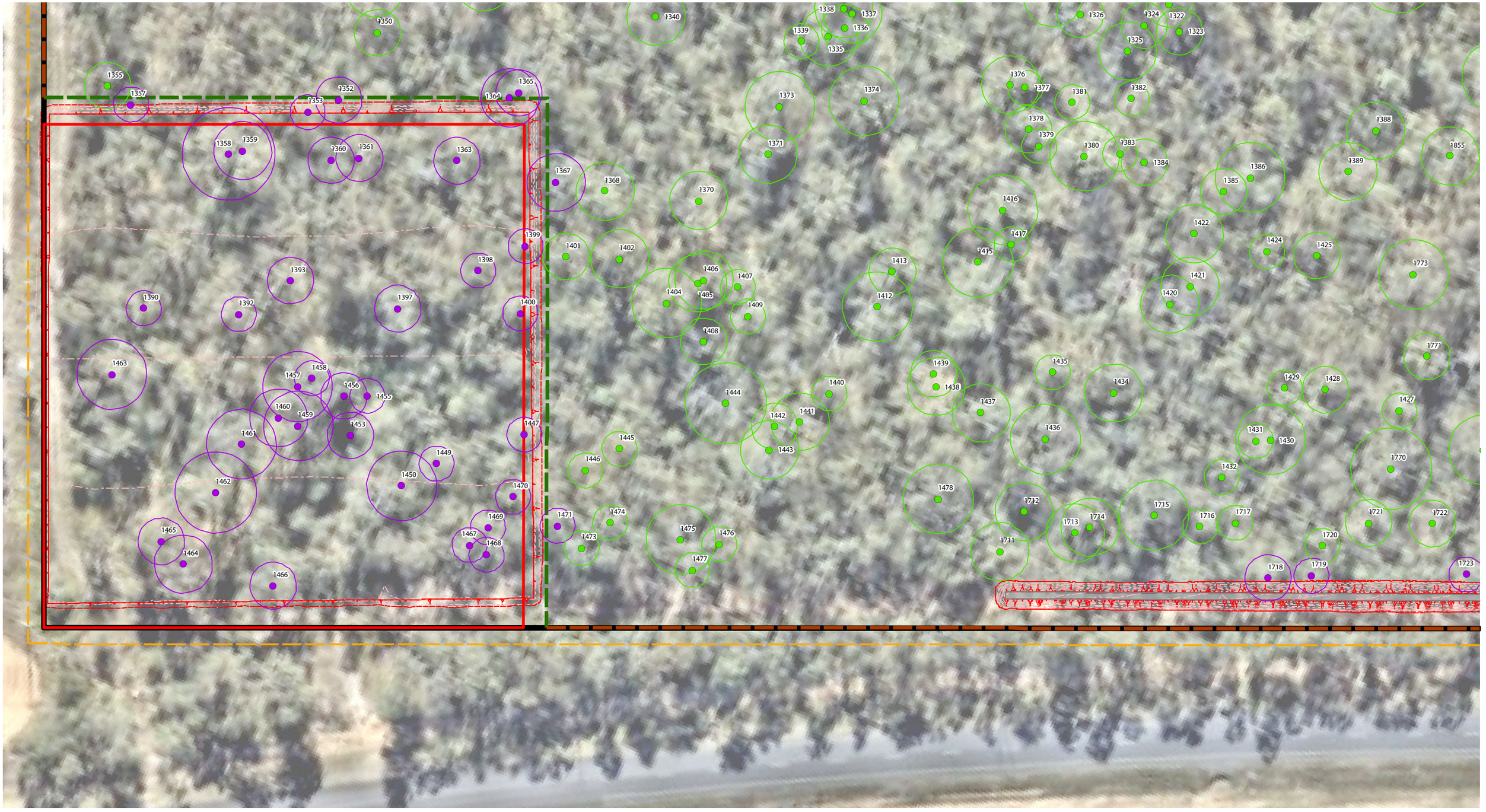
Bundaberg Ring Road, Thabeban

environmental management

Plan of:

Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E15 VCFMP A		



RPS Tree Plot (w/TPZ)

Tree to retain

Tree to remove

Disturbance Area

Engineering Detail

Proposed Buildings

Proposed Roads

Proposed Footpaths

Road and Footpath Detail

Stage Boundaries

Retaining Walls

Stormwater Design

Earthworks Batters

Design Contours

Fencing Locations (External, Indicative)

1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)

1800h Fence (Energy QLD standard)

1800h Fauna Exclusion fencing

Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 16*

saunders havill group

Client:

Queensland Health

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References:

Engineering drawing (Stantec, 2023)

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

0 5 10 20 30 40 50 m

1:750 @A3

Project:

Bundaberg Ring Road, Thabeban

environmental management

Plan of:

Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E16 VCFMP A		

Retention for trees within stormwater management area (not affected by earthworks batters) subject to detailed civil design

RPS Tree Plot (w/TPZ)

Tree to retain

Tree to remove

Disturbance Area

Engineering Detail

Proposed Buildings

Proposed Roads

Proposed Footpaths

Road and Footpath Detail

Stage Boundaries

Retaining Walls

Stormwater Design

Earthworks Batters

Design Contours

Fencing Locations (External, Indicative)

1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)

1800h Fence (Energy QLD standard)

1800h Fauna Exclusion fencing

Temporary Construction Fence (1800h chain wire fence with shade cloth)

Vegetation Clearing & Fauna Management Plan - *Detail Sheet 17*

saunders havill group

Client:

Queensland Health

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References:

Engineering drawing (Stantec, 2023)

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

0 5 10 20 30 40 50 m

1:750 @ A3

Project:

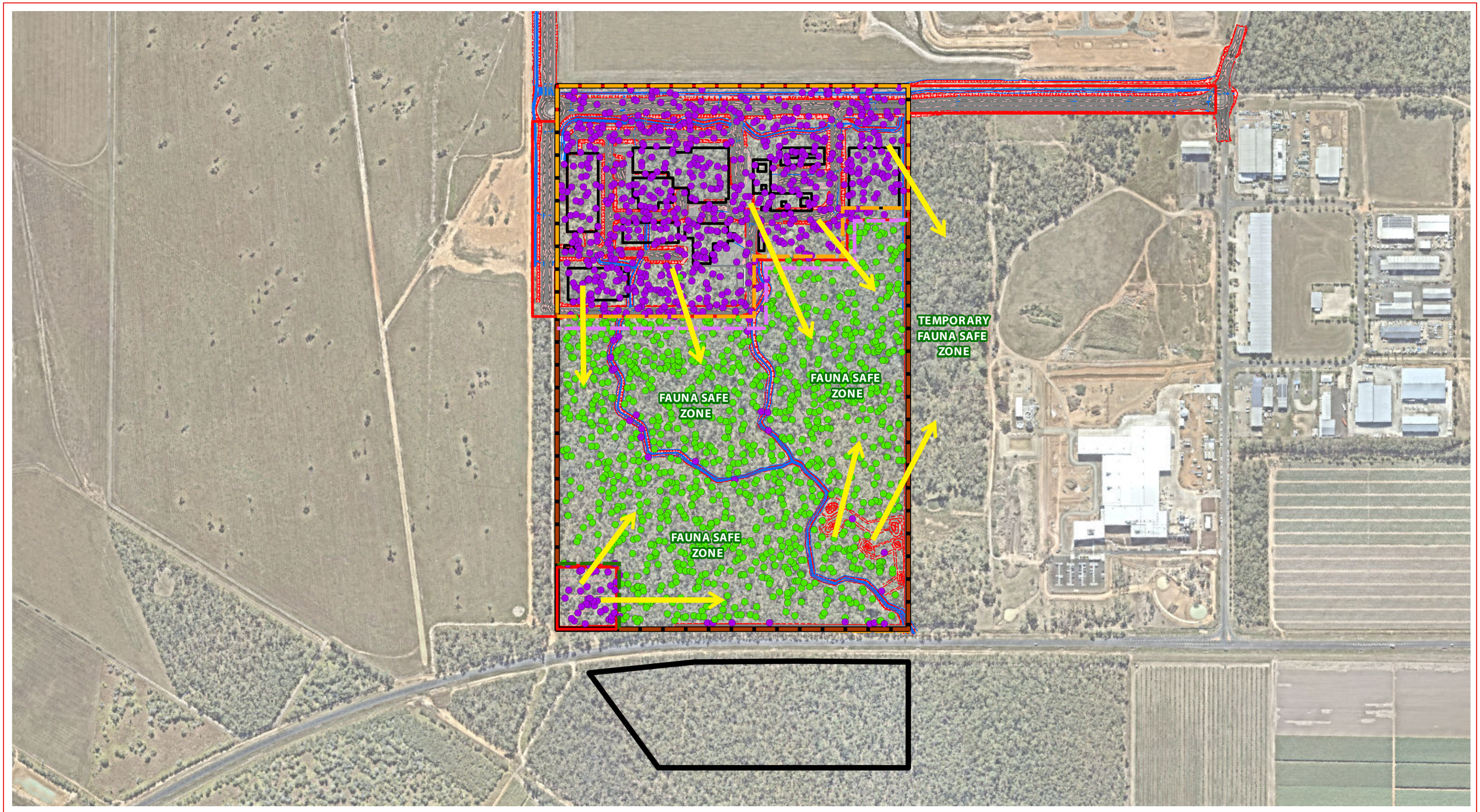
Bundaberg Ring Road, Thabeban

environmental management

Plan of:

Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E17 VCFMP A		



RPS Tree Plot

- Tree to retain
- Tree to retain subject to detailed stormwater design
- Tree to remove

Engineering Detail

- Disturbance Area
- Proposed Buildings
- Proposed Roads
- Proposed Footpaths
- Road and Footpath Detail
- Stage Boundaries
- Retaining Walls
- Stormwater Design
- Earthworks Batters
- Design Contours

Fencing Locations (External, Indicative)

- 1500h Boundary Fencing - dimbable/fauna-friendly wire fence (replace existing dilapidated log fence)
- 1800h Fence (Energy QLD standard)
- 1800h Fauna Exclusion fencing
- Temporary Construction Fence (1800h chain wire fence with shade cloth)
- Clearing direction (indicative)

Vegetation Clearing & Fauna Management Plan - *Clearing Direction*

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Client: Queensland Health

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References:
Engineering drawing (Stantec, 2023)

Amendments:

Issue	Date	Description	Checked
A	1/11/2023	Client Draft	MD

0 50 100 200 300 400 m

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Project: Bundaberg Ring Road, Thabeban

environmental management

Plan of: Vegetation Clearing & Fauna Management Plan

Date:	1/11/2023	Checked:	MD
Client Ref:	11612	Drawn:	TF
Drawing No.:	11612 E18 VCFMP A		

Tree Schedule - Job 11612
Bundaberg Ring Road, Thabeban (Queensland Health)
All Trees Surveyed by RPS

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1000	*Gum*	5	15	300	4	Remove
1001	*Gum*	5	15	300	4	Remove
1002	*Gum*	5	15	300	4	Remove
1003	*Gum*	10	15	320	4	Remove
1004	*Gum*	6	15	450	5	Remove
1005	*Gum*	6	15	300	4	Remove
1006	*Gum*	10	15	300	4	Remove
1007	*Gum*	10	20	700	8	Remove
1008	*Gum*	7	15	350	4	Remove
1009	*Gum*	7	15	350	4	Remove
1010	*Gum*	5	15	350	4	Remove
1011	*Ironbark*	6	15	300	4	Remove
1012	*Gum*	6	15	300	4	Remove
1013	*Gum*	10	20	500	6	Remove
1014	*Gum*	5	15	400	5	Remove
1015	*Gum*	10	15	500	6	Remove
1016	*Gum*	5	15	300	4	Remove
1017	*Gum*	5	15	320	4	Remove
1018	*Gum*	10	15	370	4	Remove
1019	*Gum*	6	15	350	4	Remove
1020	*Gum*	6	15	350	4	Remove
1021	*Gum*	12	20	550	7	Remove
1022	*Gum*	6	20	400	5	Remove
1023	*Gum*	6	15	350	4	Remove
1024	*Gum*	6	15	300	4	Remove
1025	*Gum*	6	15	400	5	Remove
1026	*Gum*	6	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1027	*Gum*	10	15	500	6	Remove
1028	*Gum*	5	15	400	5	Remove
1029	*Gum*	4	15	350	4	Remove
1030	*Gum*	5	15	320	4	Remove
1031	*Gum*	2	15	300	4	Remove
1032	*Gum*	10	15	450	5	Remove
1033	*Gum*	6	15	300	4	Remove
1034	*Gum*	6	15	300	4	Remove
1035	*Gum*	6	15	450	5	Remove
1036	*Gum*	6	15	350	4	Remove
1037	*Gum*	5	15	300	4	Remove
1038	*Gum*	10	15	300	4	Remove
1039	*Gum*	10	15	450	5	Remove
1040	*Gum*	6	15	300	4	Remove
1041	*Gum*	12	20	550	7	Remove
1042	*Gum*	6	15	500	6	Remove
1043	*Gum*	6	15	400	5	Remove
1044	*Gum*	8	15	300	4	Remove
1045	*Gum*	8	15	300	4	Remove
1046	*Gum*	6	15	300	4	Remove
1047	*Gum*	6	15	400	5	Remove
1048	*Gum*	8	15	350	4	Remove
1049	*Gum*	8	15	300	4	Remove
1050	*Gum*	10	15	400	5	Remove
1051	*Gum*	6	15	300	4	Remove
1052	*Paperbark*	15	15	300	4	Remove
1053	*Gum*	6	15	300	4	Remove
1054	*Gum*	8	15	350	4	Remove
1055	*Paperbark*	6	15	300	4	Remove
1056	*Paperbark*	10	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1057	*Gum*	10	15	400	5	Remove
1058	*Gum*	15	15	450	5	Remove
1059	*Gum*	10	15	300	4	Remove
1060	*Gum*	10	15	300	4	Remove
1061	*Gum*	8	15	300	4	Remove
1062	*Gum*	10	15	300	4	Remove
1063	*Gum*	10	15	400	5	Remove
1064	*Gum*	12	15	400	5	Remove
1065	*Gum*	10	15	300	4	Remove
1066	*Gum*	8	15	300	4	Remove
1067	*Gum*	10	15	350	4	Remove
1068	*Gum*	12	15	400	5	Remove
1069	*Gum*	10	15	450	5	Remove
1070	*Gum*	10	15	450	5	Remove
1071	*Gum*	8	15	300	4	Remove
1072	*Gum*	10	15	450	5	Remove
1073	*Gum*	15	15	500	6	Remove
1074	*Gum*	8	15	400	5	Remove
1075	*Gum*	10	15	350	4	Remove
1076	*Gum*	10	15	350	4	Remove
1077	*Gum*	10	15	450	5	Remove
1078	*Gum*	10	15	350	4	Remove
1079	*Gum*	10	15	350	4	Remove
1080	*Gum*	10	15	300	4	Remove
1081	*Gum*	10	15	350	4	Remove
1082	*Gum*	8	15	400	5	Remove
1083	*Gum*	8	15	300	4	Remove
1084	*Gum*	10	15	350	4	Remove
1085	*Gum*	10	15	350	4	Remove
1086	*Gum*	8	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1087	*Gum*	10	15	450	5	Remove
1088	*Gum*	10	15	300	4	Remove
1089	*Gum*	10	15	300	4	Remove
1090	*Gum*	8	15	350	4	Remove
1091	*Gum*	8	15	300	4	Remove
1092	*Gum*	8	15	300	4	Remove
1093	*Gum*	10	15	400	5	Remove
1094	*Gum*	10	15	400	5	Remove
1095	*Gum*	15	15	450	5	Remove
1096	*Gum*	10	15	400	5	Remove
1097	*Gum*	10	15	300	4	Remove
1098	*Gum*	6	15	300	4	Remove
1099	*Gum*	6	15	300	4	Remove
1100	*Gum*	10	15	500	6	Remove
1101	*Gum*	10	15	300	4	Remove
1102	*Gum*	15	15	500	6	Remove
1103	*Gum*	10	15	300	4	Remove
1104	*Gum*	10	15	300	4	Remove
1105	*Gum*	10	15	300	4	Remove
1106	*Gum*	10	15	350	4	Remove
1107	*Gum*	15	15	400	5	Remove
1108	*Gum*	6	15	400	5	Remove
1109	*Gum*	10	15	500	6	Remove
1110	*Gum*	10	15	400	5	Remove
1111	*Gum*	10	15	300	4	Remove
1112	*Gum*	6	15	350	4	Remove
1113	*Gum*	10	15	350	4	Remove
1114	*Gum*	15	15	600	7	Remove
1115	*Gum*	6	20	450	5	Remove
1116	*Gum*	6	20	350	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1117	*Gum*	8	20	400	5	Remove
1118	*Gum*	8	15	300	4	Remove
1119	*Gum*	8	15	300	4	Remove
1120	*Gum*	15	20	500	6	Remove
1121	*Gum*	10	15	350	4	Remove
1122	*Gum*	10	15	300	4	Remove
1123	*Gum*	15	20	550	7	Remove
1124	*Gum*	6	15	300	4	Remove
1125	*Gum*	10	15	450	5	Remove
1126	*Gum*	15	15	300	4	Remove
1127	*Gum*	10	15	300	4	Remove
1128	*Gum*	10	20	300	4	Remove
1129	*Gum*	15	20	550	7	Remove
1130	*Gum*	15	20	550	7	Remove
1131	*Gum*	15	20	400	5	Remove
1132	*Gum*	10	15	350	4	Remove
1133	*Gum*	10	15	350	4	Remove
1134	*Gum*	10	15	400	5	Remove
1135	*Gum*	15	20	500	6	Remove
1136	*Gum*	10	15	300	4	Remove
1137	*Gum*	10	15	300	4	Remove
1138	*Gum*	10	15	300	4	Remove
1139	*Gum*	10	15	300	4	Remove
1140	*Gum*	8	15	300	4	Remove
1142	*Gum*	7	20	400	5	Retain
1143	*Gum*	7	20	400	5	Retain
1144	*Gum*	10	20	400	5	Retain
1145	*Paperbark*	3	10	300	4	Retain
1146	*Gum*	15	20	500	6	Retain
1147	*Native*	3	10	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1148	*Gum*	15	25	650	8	Retain
1149	*Gum*	10	25	600	7	Retain
1150	*Gum*	10	20	400	5	Retain
1151	*Gum*	10	20	500	6	Retain
1152	*Gum*	10	15	300	4	Retain
1153	*Gum*	10	20	400	5	Retain
1154	*Gum*	5	15	300	4	Retain
1155	*Gum*	15	25	500	6	Retain
1156	*Gum*	5	15	300	4	Retain
1157	*Gum*	5	15	350	4	Retain
1158	*Gum*	10	15	350	4	Retain
1159	*Gum*	10	20	400	5	Retain
1160	*Gum*	15	25	500	6	Retain
1161	*Gum*	15	20	400	5	Remove
1163	*Gum*	10	25	400	5	Retain
1164	*Gum*	10	20	300	4	Retain
1165	*Gum*	10	20	300	4	Retain
1166	*Gum*	10	20	350	4	Retain
1168	*Gum*	20	30	700	8	Retain
1170	*Gum*	5	15	300	4	Retain
1171	*Gum*	10	30	400	5	Retain
1172	*Gum*	10	15	300	4	Remove
1174	*Gum*	10	15	300	4	Retain
1175	*Gum*	10	15	350	4	Retain
1176	*Gum*	10	20	400	5	Retain
1178	*Gum*	10	25	400	5	Retain
1179	*Gum*	10	20	350	4	Retain
1180	*Gum*	15	25	400	5	Retain
1181	*Gum*	10	20	300	4	Retain
1182	*Gum*	10	20	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1184	*Gum*	15	30	600	7	Retain
1185	*Gum*	15	30	500	6	Retain
1186	*Gum*	15	25	400	5	Retain
1187	*Gum*	15	30	700	8	Retain
1188	*Gum*	10	20	300	4	Retain
1189	*Gum*	5	15	300	4	Retain
1190	*Gum*	10	30	450	5	Retain
1191	*Gum*	5	15	300	4	Retain
1192	*Gum*	10	20	400	5	Retain
1193	*Gum*	5	15	300	4	Retain
1194	*Gum*	5	15	300	4	Retain
1195	*Gum*	5	15	300	4	Retain
1196	*Gum*	10	20	300	4	Retain
1197	*Gum*	10	20	300	4	Retain
1198	*Gum*	10	30	600	7	Retain
1201	*Gum*	10	30	450	5	Retain
1202	*Gum*	10	30	500	6	Retain
1203	*Gum*	10	30	400	5	Retain
1204	*Gum*	10	20	400	5	Retain
1205	*Gum*	10	20	400	5	Retain
1206	*Gum*	10	20	450	5	Retain
1207	*Gum*	10	20	450	5	Retain
1208	*Gum*	15	20	550	7	Retain
1209	*Gum*	10	20	300	4	Retain
1210	*Gum*	5	15	300	4	Retain
1212	*Gum*	10	20	350	4	Retain
1215	*Gum*	15	30	600	7	Retain
1216	*Gum*	15	30	500	6	Retain
1217	*Gum*	15	30	500	6	Retain
1218	*Gum*	5	10	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1219	*Gum*	5	15	400	5	Retain
1220	*Paperbark*	10	15	300	4	Retain
1221	*Gum*	10	15	350	4	Retain
1222	*Gum*	10	20	350	4	Retain
1223	*Gum*	15	30	500	6	Retain
1224	*Gum*	15	30	600	7	Retain
1225	*Gum*	10	30	400	5	Retain
1226	*Gum*	10	20	300	4	Retain
1227	*Gum*	10	20	300	4	Retain
1228	*Gum*	10	15	450	5	Retain
1229	*Gum*	15	30	500	6	Retain
1230	*Gum*	15	30	500	6	Retain
1231	*Gum*	15	25	400	5	Retain
1232	*Gum*	15	30	600	7	Retain
1233	*Gum*	12	20	300	4	Retain
1234	*Gum*	10	25	400	5	Retain
1235	*Gum*	10	25	400	5	Retain
1236	*Gum*	10	25	300	4	Retain
1237	*Gum*	10	25	300	4	Retain
1239	*Gum*	10	20	300	4	Retain
1241	*Gum*	20	25	600	7	Retain
1242	*Gum*	5	20	300	4	Retain
1243	*Gum*	10	30	400	5	Retain
1244	*Gum*	10	30	400	5	Retain
1245	*Gum*	15	25	400	5	Retain
1246	*Gum*	15	30	400	5	Retain
1247	*Gum*	5	15	300	4	Retain
1248	*Gum*	5	15	300	4	Retain
1249	*Gum*	5	15	300	4	Retain
1250	*Gum*	15	25	500	6	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1251	*Gum*	15	20	500	6	Retain
1252	*Gum*	10	25	400	5	Retain
1254	*Gum*	10	20	300	4	Retain
1255	*Gum*	10	25	400	5	Retain
1256	*Gum*	5	15	300	4	Retain
1257	*Gum*	15	30	400	5	Retain
1260	*Gum*	15	30	600	7	Retain
1262	*Gum*	15	30	600	7	Retain
1263	*Tree*	5	25	500	6	Retain
1264	*Gum*	15	30	600	7	Retain
1265	*Gum*	15	30	600	7	Retain
1266	*Gum*	15	30	600	7	Retain
1267	*Gum*	10	30	400	5	Retain
1268	*Gum*	10	25	400	5	Retain
1270	*Gum*	15	30	500	6	Retain
1271	*Gum*	15	30	500	6	Retain
1272	*Gum*	10	20	300	4	Retain
1273	*Gum*	10	20	300	4	Retain
1274	*Gum*	10	20	300	4	Retain
1275	*Gum*	10	20	300	4	Retain
1276	*Gum*	10	30	400	5	Retain
1277	*Gum*	15	30	600	7	Retain
1278	*Gum*	10	20	300	4	Retain
1279	*Gum*	15	25	400	5	Retain
1280	*Gum*	5	20	300	4	Retain
1281	*Gum*	5	20	300	4	Retain
1282	*Gum*	10	25	300	4	Retain
1283	*Gum*	15	30	500	6	Retain
1284	*Native*	15	20	600	7	Retain
1286	*Gum*	15	30	600	7	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1288	*Gum*	10	25	400	5	Retain
1289	*Gum*	10	25	400	5	Retain
1290	*Gum*	10	25	400	5	Retain
1291	*Gum*	10	20	300	4	Retain
1292	*Gum*	10	30	500	6	Retain
1293	*Gum*	10	25	300	4	Retain
1294	*Gum*	5	15	300	4	Retain
1295	*Gum*	15	25	500	6	Retain
1297	*Gum*	10	15	500	6	Retain
1298	*Gum*	10	20	400	5	Retain
1299	*Gum*	10	20	300	4	Retain
1300	*Gum*	10	30	500	6	Retain
1303	*Gum*	15	30	500	6	Retain
1304	*Gum*	10	20	300	4	Retain
1305	*Gum*	10	20	300	4	Retain
1306	*Gum*	5	15	300	4	Retain
1307	*Gum*	10	25	400	5	Retain
1308	*Gum*	10	25	300	4	Retain
1309	*Gum*	5	15	300	4	Retain
1310	*Gum*	10	20	400	5	Retain
1311	*Gum*	10	20	300	4	Retain
1312	*Gum*	10	20	400	5	Retain
1313	*Gum*	15	30	700	8	Retain
1315	*Gum*	5	20	300	4	Retain
1316	*Gum*	15	30	500	6	Retain
1317	*Gum*	10	25	400	5	Retain
1318	*Gum*	10	30	400	5	Retain
1319	*Gum*	15	30	500	6	Retain
1320	*Gum*	15	30	500	6	Retain
1321	*Gum*	15	30	500	6	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1322	*Gum*	5	20	400	5	Retain
1323	*Gum*	5	25	400	5	Retain
1324	*Gum*	10	20	400	5	Retain
1325	*Gum*	15	30	500	6	Retain
1326	*Gum*	10	20	400	5	Retain
1327	*Gum*	10	30	500	6	Retain
1328	*Gum*	15	30	500	6	Retain
1329	*Gum*	10	25	400	5	Retain
1330	*Gum*	5	20	300	4	Retain
1331	*Gum*	10	25	600	7	Retain
1332	*Gum*	15	30	500	6	Retain
1333	*Gum*	10	30	300	4	Retain
1334	*Gum*	15	30	500	6	Retain
1335	*Gum*	10	30	500	6	Retain
1336	*Gum*	10	30	400	5	Retain
1337	*Gum*	10	30	500	6	Retain
1338	*Gum*	10	30	500	6	Retain
1339	*Gum*	5	15	300	4	Retain
1340	*Gum*	15	25	500	6	Retain
1343	*Gum*	10	30	500	6	Retain
1344	*Gum*	10	20	300	4	Retain
1346	*Gum*	10	20	400	5	Retain
1347	*Gum*	15	30	500	6	Retain
1348	*Gum*	15	30	500	6	Retain
1350	*Gum*	10	30	400	5	Retain
1351	*Gum*	15	30	500	6	Retain
1352	*Gum*	10	20	400	5	Remove
1353	*Gum*	5	20	300	4	Remove
1355	*Gum*	10	20	400	5	Retain
1357	*Native*	5	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1358	*Gum*	15	30	800	10	Remove
1359	*Gum*	15	30	500	6	Remove
1360	*Gum*	10	25	400	5	Remove
1361	*Gum*	10	25	400	5	Remove
1363	*Gum*	5	20	400	5	Remove
1364	*Gum*	15	30	500	6	Remove
1365	*Gum*	10	20	400	5	Remove
1367	*Gum*	10	20	500	6	Remove
1368	*Gum*	10	25	500	6	Retain
1370	*Gum*	15	30	500	6	Retain
1371	*Gum*	15	30	500	6	Retain
1373	*Gum*	10	30	600	7	Retain
1374	*Gum*	15	30	600	7	Retain
1376	*Gum*	15	30	500	6	Retain
1377	*Gum*	5	20	300	4	Retain
1378	*Gum*	10	25	400	5	Retain
1379	*Gum*	5	20	300	4	Retain
1380	*Gum*	15	30	600	7	Retain
1381	*Gum*	5	20	300	4	Retain
1382	*Gum*	5	20	300	4	Retain
1383	*Gum*	5	20	300	4	Retain
1384	*Gum*	10	25	400	5	Retain
1385	*Gum*	10	25	400	5	Retain
1386	*Gum*	15	30	600	7	Retain
1388	*Gum*	5	20	500	6	Retain
1389	*Gum*	10	30	500	6	Retain
1390	*Gum*	10	20	300	4	Remove
1392	*Gum*	10	25	300	4	Remove
1393	*Gum*	10	30	400	5	Remove
1397	*Gum*	10	25	400	5	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1398	*Gum*	10	25	300	4	Remove
1399	*Gum*	10	25	300	4	Remove
1400	*Gum*	10	25	300	4	Remove
1401	*Gum*	5	20	400	5	Retain
1402	*Gum*	10	25	500	6	Retain
1404	*Gum*	15	30	600	7	Retain
1405	*Gum*	15	30	500	6	Retain
1406	*Gum*	10	20	500	6	Retain
1407	*Gum*	5	15	300	4	Retain
1408	*Gum*	5	20	400	5	Retain
1409	*Gum*	10	25	300	4	Retain
1412	*Gum*	15	30	600	7	Retain
1413	*Gum*	10	20	400	5	Retain
1415	*Gum*	15	30	600	7	Retain
1416	*Gum*	15	30	600	7	Retain
1417	*Gum*	10	15	300	4	Retain
1420	*Gum*	10	30	500	6	Retain
1421	*Gum*	10	30	500	6	Retain
1422	*Gum*	10	25	500	6	Retain
1424	*Gum*	10	25	300	4	Retain
1425	*Gum*	10	25	400	5	Retain
1427	*Gum*	10	25	300	4	Retain
1428	*Gum*	10	25	400	5	Retain
1429	*Gum*	10	25	300	4	Retain
1430	*Gum*	15	30	600	7	Retain
1431	*Gum*	10	20	300	4	Retain
1432	*Gum*	10	20	300	4	Retain
1434	*Gum*	10	30	500	6	Retain
1435	*Gum*	10	25	300	4	Retain
1436	*Gum*	15	30	600	7	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1437	*Gum*	15	30	500	6	Retain
1438	*Gum*	15	30	500	6	Retain
1439	*Gum*	10	20	400	5	Retain
1440	*Gum*	10	25	300	4	Retain
1441	*Gum*	10	25	500	6	Retain
1442	*Gum*	10	25	400	5	Retain
1443	*Gum*	15	30	500	6	Retain
1444	*Gum*	15	30	700	8	Retain
1445	*Gum*	10	25	300	4	Retain
1446	*Gum*	10	25	300	4	Retain
1447	*Gum*	10	25	300	4	Remove
1449	*Gum*	10	25	300	4	Remove
1450	*Gum*	15	30	600	7	Remove
1453	*Gum*	15	30	400	5	Remove
1455	*Gum*	5	20	300	4	Remove
1456	*Native*	5	10	400	5	Remove
1457	*Gum*	15	30	600	7	Remove
1458	*Gum*	10	25	300	4	Remove
1459	*Gum*	15	30	600	7	Remove
1460	*Gum*	15	30	500	6	Remove
1461	*Gum*	15	30	600	7	Remove
1462	*Gum*	15	30	700	8	Remove
1463	*Gum*	15	30	600	7	Remove
1464	*Gum*	15	25	500	6	Remove
1465	*Gum*	15	25	400	5	Remove
1466	*Gum*	15	25	400	5	Remove
1467	*Gum*	10	25	300	4	Remove
1468	*Gum*	10	25	300	4	Remove
1469	*Gum*	10	25	300	4	Remove
1470	*Gum*	10	25	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1471	*Gum*	10	25	300	4	Remove
1473	*Gum*	10	25	300	4	Retain
1474	*Gum*	10	25	300	4	Retain
1475	*Gum*	10	30	600	7	Retain
1476	*Gum*	10	25	300	4	Retain
1477	*Gum*	10	25	300	4	Retain
1478	*Gum*	15	30	600	7	Retain
1480	*Gum*	15	30	500	6	Retain
1481	*Gum*	5	20	300	4	Retain
1482	*Gum*	15	30	600	7	Retain
1483	*Gum*	5	20	300	4	Retain
1486	*Gum*	15	30	600	7	Retain
1487	*Gum*	15	30	500	6	Retain
1488	*Gum*	15	25	400	5	Retain
1489	*Gum*	15	25	500	6	Retain
1491	*Gum*	15	20	400	5	Retain
1492	*Gum*	10	20	400	5	Remove
1493	*Gum*	10	25	300	4	Retain
1494	*Gum*	10	25	400	5	Retain
1495	*Gum*	10	25	300	4	Retain
1496	*Gum*	10	20	300	4	Retain
1497	*Gum*	10	20	400	5	Retain
1498	*Gum*	10	20	300	4	Retain
1499	*Gum*	10	10	400	5	Retain
1500	*Gum*	15	30	500	6	Retain
1501	*Gum*	10	25	300	4	Retain
1502	*Gum*	10	25	400	5	Retain
1504	*Gum*	10	25	500	6	Retain
1505	*Gum*	15	30	600	7	Retain
1506	*Gum*	10	25	400	5	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1507	*Gum*	5	20	500	6	Retain
1508	*Gum*	15	30	600	7	Retain
1509	*Gum*	10	20	300	4	Retain
1510	*Gum*	10	25	400	5	Retain
1511	*Gum*	15	30	700	8	Retain
1512	*Gum*	10	30	400	5	Retain
1513	*Gum*	10	30	400	5	Retain
1514	*Gum*	15	30	600	7	Retain
1515	*Gum*	10	30	500	6	Retain
1517	*Gum*	10	25	400	5	Retain
1518	*Gum*	10	30	500	6	Retain
1519	*Gum*	10	30	400	5	Retain
1520	*Gum*	15	30	600	7	Retain
1521	*Gum*	10	30	400	5	Retain
1522	*Gum*	10	30	400	5	Retain
1523	*Gum*	15	30	600	7	Retain
1524	*Gum*	15	25	400	5	Retain
1525	*Paperbark*	3	10	300	4	Retain
1526	*Gum*	15	30	500	6	Retain
1527	*Gum*	10	30	500	6	Retain
1528	*Gum*	10	30	500	6	Retain
1529	*Gum*	15	30	600	7	Retain
1531	*Gum*	10	25	400	5	Retain
1532	*Gum*	10	25	500	6	Retain
1533	*Gum*	5	25	300	4	Retain
1534	*Gum*	5	15	300	4	Retain
1535	*Gum*	10	30	600	7	Retain
1536	*Gum*	10	25	400	5	Remove
1537	*Gum*	10	25	400	5	Retain
1538	*Native*	15	20	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1539	*Gum*	10	25	700	8	Remove
1540	*Gum*	10	25	300	4	Retain
1541	*Gum*	10	20	300	4	Retain
1543	*Gum*	10	15	500	6	Retain
1544	*Gum*	10	20	400	5	Retain
1545	*Gum*	10	30	700	8	Retain
1546	*Gum*	10	25	400	5	Retain
1548	*Gum*	10	25	500	6	Retain
1549	*Gum*	5	10	400	5	Retain
1551	*Gum*	10	20	400	5	Retain
1554	*Gum*	10	20	300	4	Retain
1555	*Gum*	10	15	300	4	Retain
1556	*Gum*	10	20	300	4	Retain
1557	*Gum*	10	25	500	6	Retain
1558	*Gum*	10	20	300	4	Retain
1559	*Gum*	10	15	300	4	Remove
1560	*Gum*	10	15	400	5	Remove
1561	*Gum*	10	15	300	4	Remove
1562	*Gum*	10	15	300	4	Remove
1563	*Gum*	10	15	300	4	Remove
1564	*Gum*	10	15	300	4	Remove
1565	*Gum*	10	15	300	4	Remove
1566	*Gum*	10	15	300	4	Remove
1567	*Gum*	15	15	350	4	Remove
1568	*Gum*	10	15	300	4	Remove
1569	*Gum*	10	15	300	4	Remove
1570	*Gum*	10	15	350	4	Remove
1571	*Gum*	10	15	300	4	Remove
1572	*Gum*	10	15	300	4	Remove
1573	*Gum*	10	15	400	5	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1574	*Gum*	10	15	300	4	Remove
1575	*Gum*	10	15	350	4	Remove
1576	*Gum*	10	15	400	5	Remove
1577	*Gum*	10	15	300	4	Remove
1578	*Gum*	10	15	300	4	Remove
1579	*Gum*	10	15	300	4	Remove
1580	*Gum*	8	20	450	5	Remove
1581	*Gum*	15	20	600	7	Remove
1582	*Gum*	10	15	350	4	Remove
1583	*Gum*	10	15	400	5	Remove
1584	*Gum*	10	15	350	4	Remove
1585	*Gum*	10	15	350	4	Remove
1586	*Gum*	10	15	350	4	Remove
1587	*Gum*	10	15	300	4	Remove
1588	*Gum*	10	15	300	4	Remove
1589	*Gum*	10	15	350	4	Remove
1590	*Gum*	10	15	500	6	Remove
1591	*Gum*	10	15	400	5	Remove
1592	*Gum*	10	15	300	4	Remove
1593	*Gum*	10	15	450	5	Remove
1594	*Gum*	10	15	350	4	Remove
1595	*Gum*	10	15	300	4	Remove
1596	*Gum*	10	20	300	4	Remove
1597	*Gum*	10	20	300	4	Remove
1598	*Gum*	10	20	300	4	Remove
1599	*Gum*	10	15	300	4	Remove
1600	*Gum*	20	15	650	8	Remove
1601	*Gum*	10	15	400	5	Remove
1602	*Gum*	10	15	300	4	Remove
1603	*Gum*	10	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1604	*Gum*	10	15	400	5	Remove
1605	*Gum*	10	15	300	4	Remove
1606	*Gum*	10	15	500	6	Remove
1607	*Gum*	10	15	400	5	Remove
1608	*Gum*	10	15	300	4	Remove
1609	*Paperbark*	10	15	300	4	Remove
1610	*Gum*	10	15	300	4	Remove
1611	*Gum*	10	15	300	4	Remove
1612	*Gum*	10	15	300	4	Remove
1613	*Gum*	10	15	400	5	Remove
1614	*Gum*	10	15	350	4	Remove
1615	*Gum*	10	15	500	6	Remove
1616	*Gum*	10	15	400	5	Remove
1617	*Gum*	15	15	500	6	Remove
1618	*Gum*	10	15	300	4	Remove
1619	*Gum*	10	15	300	4	Remove
1620	*Gum*	10	15	350	4	Remove
1621	*Gum*	15	15	500	6	Remove
1622	*Gum*	10	15	350	4	Remove
1623	*Gum*	10	15	300	4	Remove
1624	*Gum*	10	15	400	5	Remove
1625	*Gum*	10	15	350	4	Remove
1626	*Gum*	20	15	450	5	Remove
1627	*Gum*	10	15	300	4	Remove
1628	*Gum*	10	15	400	5	Remove
1629	*Gum*	10	15	300	4	Remove
1630	*Gum*	10	15	300	4	Remove
1631	*Gum*	10	15	400	5	Remove
1632	*Gum*	10	15	350	4	Remove
1633	*Gum*	10	15	350	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1634	*Gum*	10	15	300	4	Remove
1635	*Paperbark*	10	15	300	4	Remove
1636	*Paperbark*	10	15	300	4	Remove
1637	*Gum*	10	15	300	4	Remove
1638	*Gum*	10	15	300	4	Remove
1639	*Gum*	10	15	300	4	Remove
1640	*Gum*	10	15	350	4	Remove
1641	*Gum*	10	15	350	4	Remove
1642	*Gum*	10	15	350	4	Remove
1643	*Gum*	15	20	500	6	Remove
1644	*Gum*	10	15	400	5	Remove
1645	*Gum*	10	15	350	4	Remove
1646	*Gum*	10	15	350	4	Remove
1647	*Gum*	10	15	300	4	Remove
1648	*Gum*	10	15	300	4	Remove
1649	*Gum*	10	15	300	4	Remove
1650	*Gum*	10	15	400	5	Remove
1651	*Gum*	10	15	300	4	Remove
1652	*Paperbark*	10	15	300	4	Remove
1653	*Gum*	10	15	300	4	Remove
1654	*Gum*	10	15	300	4	Remove
1655	*Gum*	10	15	350	4	Remove
1656	*Gum*	10	15	300	4	Remove
1657	*Gum*	10	15	300	4	Remove
1658	*Gum*	10	15	400	5	Remove
1659	*Gum*	10	15	400	5	Remove
1660	*Gum*	10	15	350	4	Remove
1662	*Gum*	10	15	300	4	Remove
1663	*Gum*	10	15	400	5	Remove
1664	*Gum*	10	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1665	*Gum*	10	15	450	5	Remove
1666	*Paperbark*	10	15	300	4	Remove
1667	*Paperbark*	5	15	300	4	Remove
1668	*Gum*	10	15	350	4	Remove
1669	*Gum*	15	15	550	7	Remove
1670	*Gum*	10	15	350	4	Remove
1671	*Gum*	10	15	500	6	Remove
1672	*Gum*	10	15	300	4	Remove
1673	*Gum*	15	15	400	5	Remove
1674	*Gum*	10	15	300	4	Remove
1676	*Gum*	10	15	400	5	Remove
1677	*Gum*	10	15	300	4	Remove
1678	*Gum*	10	15	300	4	Remove
1679	*Gum*	10	15	350	4	Remove
1680	*Gum*	10	15	300	4	Remove
1681	*Gum*	10	15	400	5	Remove
1682	*Gum*	10	15	300	4	Remove
1683	*Paperbark*	10	15	300	4	Remove
1684	*Paperbark*	10	15	300	4	Remove
1685	*Paperbark*	10	15	300	4	Remove
1686	*Gum*	10	15	400	5	Remove
1687	*Gum*	10	15	300	4	Remove
1688	*Gum*	10	20	300	4	Remove
1689	*Gum*	10	15	500	6	Remove
1690	*Paperbark*	10	15	300	4	Remove
1691	*Gum*	10	15	450	5	Remove
1692	*Gum*	10	15	400	5	Remove
1693	*Gum*	10	15	400	5	Remove
1694	*Gum*	10	15	350	4	Remove
1695	*Gum*	10	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1696	*Gum*	10	15	450	5	Remove
1697	*Gum*	15	20	400	5	Remove
1698	*Gum*	10	15	300	4	Remove
1699	*Paperbark*	10	15	300	4	Remove
1700	*Gum*	10	15	300	4	Remove
1701	*Paperbark*	10	15	300	4	Remove
1702	*Gum*	15	20	1000	12	Remove
1703	*Gum*	10	15	300	4	Remove
1704	*Gum*	10	15	350	4	Remove
1705	*Gum*	10	15	400	5	Remove
1706	*Gum*	10	15	400	5	Remove
1707	*Gum*	10	15	500	6	Remove
1708	*Gum*	10	20	600	7	Remove
1709	*Gum*	10	15	500	6	Remove
1710	*Gum*	10	15	400	5	Remove
1711	*Gum*	5	15	500	6	Retain
1712	*Gum*	5	15	500	6	Retain
1713	*Gum*	5	15	500	6	Retain
1714	*Gum*	10	25	500	6	Retain
1715	*Gum*	15	25	600	7	Retain
1716	*Gum*	10	25	300	4	Retain
1717	*Gum*	10	20	300	4	Retain
1718	*Gum*	10	25	400	5	Remove
1719	*Gum*	10	20	300	4	Remove
1720	*Gum*	10	20	300	4	Retain
1721	*Gum*	10	25	400	5	Retain
1722	*Gum*	5	15	400	5	Retain
1723	*Gum*	5	20	300	4	Remove
1724	*Gum*	10	20	500	6	Retain
1725	*Gum*	10	20	500	6	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1729	*Gum*	5	25	300	4	Retain
1730	*Gum*	5	20	300	4	Retain
1731	*Gum*	5	20	300	4	Remove
1732	*Gum*	10	30	500	6	Retain
1733	*Gum*	10	30	500	6	Retain
1735	*Gum*	10	25	500	6	Retain
1736	*Gum*	10	25	400	5	Retain
1739	*Gum*	10	25	600	7	Retain
1740	*Gum*	10	20	300	4	Remove
1741	*Gum*	10	20	300	4	Retain
1742	*Gum*	10	20	300	4	Remove
1743	*Gum*	10	20	300	4	Remove
1744	*Gum*	10	25	300	4	Retain
1745	*Gum*	10	20	300	4	Retain
1746	*Gum*	10	25	300	4	Remove
1747	*Gum*	15	25	500	6	Retain
1748	*Gum*	15	30	500	6	Retain
1750	*Gum*	10	25	500	6	Retain
1751	*Gum*	10	25	400	5	Retain
1752	*Gum*	10	25	400	5	Retain
1753	*Paperbark*	5	15	300	4	Retain
1754	*Gum*	10	30	450	5	Retain
1755	*Gum*	10	25	300	4	Retain
1758	*Paperbark*	10	10	300	4	Retain
1759	*Gum*	10	25	400	5	Retain
1760	*Gum*	10	25	300	4	Retain
1761	*Gum*	15	25	500	6	Retain
1762	*Gum*	15	30	500	6	Retain
1763	*Gum*	15	25	500	6	Retain
1764	*Gum*	15	25	700	8	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1766	*Gum*	10	20	300	4	Retain
1768	*Gum*	10	20	300	4	Retain
1769	*Gum*	15	30	600	7	Retain
1770	*Gum*	15	25	700	8	Retain
1771	*Gum*	10	25	400	5	Retain
1773	*Gum*	15	30	600	7	Retain
1777	*Native*	5	15	300	4	Retain
1778	*Gum*	15	30	600	7	Retain
1779	*Gum*	10	20	400	5	Retain
1780	*Gum*	10	20	400	5	Retain
1781	*Gum*	10	25	500	6	Retain
1782	*Native*	5	15	300	4	Retain
1783	*Gum*	15	30	600	7	Retain
1784	*Gum*	5	15	400	5	Retain
1786	*Gum*	10	20	400	5	Retain
1787	*Gum*	10	20	400	5	Retain
1788	*Gum*	10	20	400	5	Retain
1789	*Gum*	10	20	400	5	Retain
1790	*Gum*	10	20	600	7	Retain
1791	*Gum*	10	25	600	7	Retain
1792	*Gum*	15	30	600	7	Retain
1793	*Paperbark*	5	15	300	4	Retain
1794	*Paperbark*	5	15	300	4	Retain
1795	*Gum*	5	15	300	4	Retain
1796	*Gum*	15	30	400	5	Retain
1797	*Gum*	15	30	500	6	Retain
1798	*Gum*	15	30	500	6	Retain
1799	*Gum*	15	30	500	6	Retain
1802	*Gum*	10	25	500	6	Retain
1803	*Gum*	15	30	500	6	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1807	*Gum*	10	20	400	5	Remove
1808	*Gum*	10	25	400	5	Retain
1809	*Gum*	15	30	500	6	Retain
1812	*Gum*	10	25	400	5	Retain
1813	*Gum*	10	25	500	6	Retain
1814	*Gum*	10	25	400	5	Retain
1815	*Gum*	10	20	300	4	Retain
1816	*Gum*	15	25	500	6	Retain
1817	*Gum*	10	20	300	4	Retain
1818	*Gum*	10	25	300	4	Retain
1819	*Gum*	10	20	300	4	Retain
1820	*Gum*	5	15	300	4	Retain
1821	*Gum*	5	15	300	4	Retain
1822	*Gum*	15	30	500	6	Retain
1823	*Paperbark*	5	15	300	4	Retain
1824	*Paperbark*	10	20	500	6	Retain
1826	*Gum*	5	20	400	5	Retain
1827	*Gum*	10	20	400	5	Retain
1829	*Gum*	15	25	700	8	Retain
1830	*Gum*	15	25	500	6	Retain
1831	*Gum*	15	25	500	6	Retain
1832	*Gum*	10	20	400	5	Retain
1833	*Gum*	10	20	400	5	Retain
1834	*Gum*	10	25	400	5	Retain
1835	*Gum*	10	25	400	5	Retain
1837	*Gum*	10	25	400	5	Retain
1838	*Paperbark*	5	10	300	4	Retain
1839	*Paperbark*	5	15	300	4	Retain
1840	*Gum*	10	30	400	5	Retain
1841	*Gum*	15	30	600	7	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1842	*Paperbark*	5	15	300	4	Retain
1843	*Gum*	15	30	500	6	Retain
1844	*Gum*	15	25	400	5	Retain
1845	*Paperbark*	5	15	300	4	Retain
1846	*Gum*	15	30	600	7	Retain
1847	*Gum*	15	25	500	6	Retain
1848	*Gum*	10	20	300	4	Retain
1849	*Gum*	15	25	500	6	Retain
1850	*Gum*	10	20	400	5	Retain
1851	*Gum*	15	30	600	7	Retain
1855	*Gum*	10	25	500	6	Retain
1856	*Gum*	15	30	600	7	Retain
1857	*Paperbark*	5	15	300	4	Retain
1859	*Gum*	15	30	500	6	Retain
1860	*Gum*	10	25	400	5	Retain
1861	*Gum*	10	20	400	5	Retain
1862	*Gum*	10	20	300	4	Retain
1863	*Gum*	10	20	300	4	Retain
1864	*Gum*	10	20	300	4	Retain
1865	*Gum*	10	25	500	6	Retain
1866	*Gum*	10	25	400	5	Retain
1867	*Gum*	10	20	400	5	Retain
1868	*Gum*	10	20	400	5	Retain
1869	*Gum*	5	20	400	5	Retain
1870	*Gum*	10	25	500	6	Retain
1871	*Gum*	10	20	300	4	Retain
1872	*Gum*	10	30	500	6	Retain
1873	*Gum*	10	10	300	4	Retain
1874	*Gum*	10	20	400	5	Retain
1875	*Gum*	10	25	500	6	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1876	*Gum*	10	25	400	5	Retain
1877	*Gum*	10	20	400	5	Retain
1878	*Gum*	10	20	300	4	Retain
1880	*Gum*	10	20	400	5	Retain
1881	*Paperbark*	5	10	300	4	Retain
1882	*Gum*	10	25	500	6	Retain
1885	*Gum*	10	20	450	5	Retain
1886	*Gum*	10	20	400	5	Retain
1888	*Gum*	5	20	500	6	Retain
1889	*Gum*	10	30	450	5	Retain
1890	*Gum*	15	25	400	5	Retain
1891	*Gum*	5	20	400	5	Retain
1892	*Paperbark*	5	10	300	4	Retain
1893	*Gum*	15	25	500	6	Retain
1895	*Gum*	10	20	400	5	Retain
1896	*Gum*	15	30	600	7	Retain
1897	*Gum*	10	25	600	7	Remove
1901	*Gum*	10	25	400	5	Retain
1902	*Gum*	10	25	400	5	Retain
1904	*Gum*	10	25	500	6	Retain
1905	*Gum*	5	25	300	4	Retain
1906	*Gum*	10	25	400	5	Retain
1907	*Gum*	5	20	300	4	Retain
1908	*Gum*	15	25	500	6	Retain
1910	*Gum*	5	20	400	5	Retain
1911	*Gum*	5	25	500	6	Retain
1912	*Gum*	5	20	300	4	Retain
1913	*Gum*	10	25	500	6	Retain
1914	*Gum*	10	25	500	6	Retain
1915	*Gum*	10	20	400	5	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1916	*Gum*	10	20	400	5	Retain
1919	*Gum*	15	30	600	7	Retain
1920	*Gum*	5	25	600	7	Retain
1923	*Gum*	10	20	300	4	Retain
1925	*Gum*	10	20	300	4	Retain
1926	*Gum*	10	20	300	4	Retain
1927	*Gum*	10	20	400	5	Retain
1928	*Gum*	10	25	500	6	Retain
1929	*Gum*	15	25	600	7	Retain
1930	*Gum*	10	25	500	6	Retain
1931	*Gum*	10	20	300	4	Retain
1932	*Gum*	10	20	400	5	Retain
1933	*Gum*	10	20	400	5	Retain
1934	*Gum*	10	25	500	6	Retain
1935	*Gum*	10	25	500	6	Retain
1936	*Gum*	10	25	400	5	Retain
1937	*Gum*	10	25	400	5	Retain
1938	*Gum*	10	25	400	5	Retain
1940	*Gum*	10	25	400	5	Remove
1941	*Gum*	15	25	400	5	Retain
1942	*Gum*	5	25	300	4	Retain
1943	*Gum*	10	25	400	5	Retain
1944	*Gum*	15	25	500	6	Retain
1945	*Gum*	10	25	500	6	Retain
1946	*Gum*	10	20	300	4	Retain
1947	*Gum*	5	20	300	4	Retain
1948	*Gum*	5	20	400	5	Retain
1949	*Gum*	5	20	300	4	Retain
1950	*Gum*	5	20	300	4	Retain
1951	*Gum*	5	20	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1952	*Gum*	5	20	300	4	Retain
1953	*Gum*	10	20	400	5	Retain
1954	*Gum*	10	25	500	6	Retain
1955	*Gum*	10	20	300	4	Retain
1956	*Gum*	10	20	300	4	Retain
1957	*Gum*	10	25	400	5	Retain
1958	*Gum*	5	20	300	4	Retain
1959	*Gum*	5	20	300	4	Retain
1960	*Gum*	10	20	300	4	Retain
1961	*Gum*	10	25	500	6	Retain
1962	*Gum*	5	20	300	4	Retain
1964	*Gum*	10	25	400	5	Retain
1965	*Gum*	15	20	400	5	Retain
1966	*Gum*	10	25	400	5	Retain
1967	*Gum*	10	25	400	5	Retain
1968	*Gum*	10	20	400	5	Retain
1969	*Gum*	15	25	450	5	Retain
1970	*Gum*	5	20	300	4	Retain
1971	*Gum*	10	20	400	5	Retain
1972	*Gum*	10	25	450	5	Retain
1973	*Paperbark*	5	15	300	4	Retain
1974	*Gum*	5	20	450	5	Retain
1975	*Gum*	5	15	300	4	Remove
1976	*Gum*	10	25	400	5	Retain
1977	*Gum*	10	25	400	5	Retain
1978	*Gum*	10	20	400	5	Retain
1979	*Gum*	10	30	700	8	Retain
1980	*Gum*	15	30	600	7	Retain
1981	*Gum*	5	20	400	5	Retain
1982	*Gum*	15	30	500	6	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
1983	*Gum*	10	20	300	4	Retain
1984	*Gum*	10	20	400	5	Retain
1985	*Gum*	10	20	400	5	Retain
1986	*Gum*	10	25	400	5	Retain
1987	*Gum*	5	15	400	5	Retain
1988	*Gum*	5	15	300	4	Retain
1989	*Gum*	10	25	400	5	Retain
1990	*Gum*	10	25	500	6	Retain
1991	*Gum*	10	25	400	5	Retain
1992	*Gum*	10	30	500	6	Retain
1994	*Gum*	10	20	300	4	Retain
1995	*Gum*	15	25	600	7	Retain
1996	*Gum*	10	20	300	4	Retain
1997	*Gum*	10	20	400	5	Retain
1998	*Gum*	5	20	400	5	Retain
1999	*Gum*	10	20	300	4	Retain
2000	*Gum*	10	20	300	4	Retain
2001	*Gum*	10	20	400	5	Retain
2002	*Gum*	10	20	400	5	Retain
2003	*Gum*	5	15	400	5	Retain
2004	*Gum*	10	20	300	4	Retain
2005	*Paperbark*	5	15	300	4	Retain
2006	*Gum*	10	30	500	6	Retain
2008	*Gum*	10	20	400	5	Retain
2009	*Gum*	10	20	400	5	Retain
2010	*Gum*	15	25	500	6	Retain
2012	*Gum*	5	15	300	4	Retain
2013	*Gum*	10	20	400	5	Retain
2014	*Gum*	10	20	300	4	Retain
2016	*Gum*	10	25	900	11	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2017	*Gum*	10	20	300	4	Retain
2018	*Gum*	10	20	300	4	Retain
2019	*Gum*	10	20	400	5	Retain
2020	*Gum*	10	25	400	5	Retain
2021	*Gum*	5	20	300	4	Retain
2022	*Gum*	5	20	400	5	Retain
2023	*Gum*	5	15	400	5	Retain
2024	*Gum*	10	20	400	5	Retain
2025	*Gum*	15	30	500	6	Retain
2026	*Gum*	10	15	500	6	Retain
2027	*Gum*	10	20	400	5	Retain
2028	*Gum*	10	20	350	4	Retain
2029	*Gum*	5	15	350	4	Retain
2030	*Gum*	10	20	400	5	Retain
2031	*Gum*	10	20	300	4	Retain
2032	*Gum*	15	20	600	7	Retain
2033	*Gum*	5	15	300	4	Retain
2034	*Gum*	5	15	300	4	Retain
2035	*Gum*	10	25	500	6	Retain
2036	*Gum*	10	20	400	5	Retain
2037	*Gum*	10	20	400	5	Retain
2038	*Gum*	5	15	300	4	Retain
2039	*Gum*	10	25	400	5	Retain
2040	*Gum*	10	25	400	5	Retain
2041	*Gum*	10	30	500	6	Retain
2042	*Gum*	10	20	400	5	Retain
2043	*Gum*	10	20	400	5	Retain
2044	*Gum*	5	15	300	4	Retain
2045	*Gum*	5	15	300	4	Retain
2046	*Gum*	10	30	500	6	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2048	*Gum*	15	20	400	5	Retain
2049	*Gum*	5	15	400	5	Retain
2050	*Gum*	10	20	400	5	Retain
2051	*Gum*	10	20	400	5	Retain
2052	*Gum*	10	25	400	5	Retain
2053	*Gum*	10	20	400	5	Retain
2054	*Gum*	5	15	300	4	Retain
2055	*Gum*	5	20	400	5	Retain
2056	*Gum*	5	15	300	4	Retain
2057	*Gum*	5	15	300	4	Retain
2058	*Gum*	15	30	700	8	Retain
2059	*Gum*	10	20	400	5	Retain
2060	*Gum*	10	20	300	4	Retain
2061	*Gum*	10	20	400	5	Retain
2062	*Gum*	5	15	400	5	Retain
2063	*Gum*	5	20	450	5	Retain
2064	*Gum*	5	10	300	4	Retain
2065	*Gum*	5	15	300	4	Retain
2066	*Gum*	10	20	400	5	Retain
2067	*Gum*	10	25	500	6	Retain
2069	*Gum*	5	15	300	4	Retain
2070	*Gum*	5	15	300	4	Retain
2071	*Gum*	10	20	450	5	Retain
2072	*Gum*	10	25	400	5	Retain
2073	*Gum*	10	25	400	5	Retain
2074	*Gum*	10	25	400	5	Retain
2075	*Gum*	5	20	300	4	Retain
2076	*Gum*	10	25	500	6	Retain
2077	*Gum*	10	20	300	4	Retain
2078	*Gum*	10	20	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2079	*Gum*	10	20	300	4	Retain
2080	*Gum*	10	25	400	5	Retain
2081	*Gum*	10	20	400	5	Retain
2085	*Gum*	5	15	300	4	Remove
2086	*Gum*	15	30	500	6	Retain
2088	*Gum*	5	20	400	5	Retain
2089	*Gum*	5	25	450	5	Retain
2090	*Gum*	5	15	300	4	Retain
2092	*Gum*	15	25	450	5	Retain
2093	*Gum*	10	30	450	5	Retain
2094	*Gum*	10	25	400	5	Remove
2096	*Gum*	5	15	300	4	Remove
2097	*Gum*	10	25	500	6	Retain
2098	*Gum*	10	20	400	5	Retain
2100	*Gum*	5	15	300	4	Retain
2101	*Gum*	5	15	300	4	Retain
2102	*Gum*	5	15	300	4	Retain
2103	*Gum*	10	25	450	5	Retain
2104	*Gum*	10	25	400	5	Retain
2105	*Gum*	10	25	400	5	Retain
2106	*Gum*	10	25	400	5	Retain
2107	*Gum*	10	25	400	5	Retain
2108	*Gum*	10	10	300	4	Retain
2109	*Gum*	5	15	400	5	Retain
2111	*Gum*	5	20	300	4	Retain
2112	*Gum*	5	20	300	4	Retain
2114	*Gum*	10	20	300	4	Retain
2115	*Gum*	10	20	300	4	Retain
2116	*Gum*	10	25	450	5	Retain
2117	*Gum*	10	25	500	6	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2118	*Gum*	10	30	500	6	Retain
2120	*Gum*	10	20	450	5	Retain
2121	*Gum*	10	20	450	5	Retain
2122	*Gum*	5	15	300	4	Retain
2123	*Gum*	15	30	500	6	Retain
2124	*Gum*	10	20	300	4	Retain
2125	*Gum*	10	25	450	5	Retain
2126	*Gum*	15	25	450	5	Retain
2127	*Gum*	10	25	400	5	Retain
2128	*Gum*	10	25	500	6	Retain
2129	*Gum*	10	25	400	5	Retain
2130	*Gum*	10	20	400	5	Retain
2131	*Gum*	10	20	400	5	Retain
2132	*Gum*	10	20	400	5	Retain
2133	*Gum*	5	25	400	5	Retain
2134	*Gum*	5	20	300	4	Retain
2135	*Gum*	5	20	300	4	Retain
2136	*Gum*	10	25	400	5	Retain
2138	*Gum*	10	20	400	5	Retain
2139	*Gum*	10	20	300	4	Retain
2140	*Gum*	10	20	400	5	Retain
2141	*Gum*	10	20	400	5	Retain
2142	*Gum*	10	20	300	4	Retain
2143	*Gum*	5	25	300	4	Retain
2144	*Gum*	5	25	300	4	Retain
2145	*Gum*	10	25	500	6	Retain
2146	*Gum*	5	20	400	5	Retain
2148	*Gum*	10	25	400	5	Retain
2149	*Gum*	10	25	400	5	Retain
2150	*Gum*	10	30	600	7	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2151	*Gum*	10	30	500	6	Retain
2152	*Gum*	10	25	400	5	Retain
2153	*Gum*	5	15	300	4	Retain
2154	*Gum*	10	25	400	5	Retain
2155	*Gum*	5	15	300	4	Retain
2156	*Gum*	10	25	500	6	Retain
2157	*Gum*	10	20	300	4	Retain
2158	*Gum*	10	20	400	5	Retain
2159	*Gum*	10	25	400	5	Retain
2160	*Gum*	10	25	400	5	Retain
2161	*Gum*	15	30	500	6	Retain
2162	*Gum*	10	20	400	5	Retain
2163	*Gum*	10	20	400	5	Retain
2164	*Gum*	10	20	300	4	Retain
2165	*Gum*	15	30	600	7	Retain
2166	*Gum*	15	30	600	7	Retain
2169	*Gum*	15	30	600	7	Retain
2170	*Gum*	15	30	500	6	Retain
2171	*Gum*	10	25	400	5	Retain
2172	*Gum*	15	30	600	7	Retain
2173	*Gum*	10	20	400	5	Retain
2174	*Gum*	10	20	400	5	Retain
2176	*Gum*	15	30	600	7	Retain
2178	*Gum*	10	25	400	5	Retain
2179	*Gum*	5	20	400	5	Retain
2180	*Gum*	10	20	300	4	Retain
2181	*Gum*	10	25	500	6	Retain
2182	*Native*	5	10	300	4	Retain
2183	*Gum*	5	15	300	4	Retain
2184	*Gum*	10	25	400	5	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2185	*Gum*	5	15	300	4	Retain
2186	*Gum*	15	30	500	6	Retain
2187	*Gum*	5	20	300	4	Retain
2188	*Gum*	10	25	500	6	Retain
2189	*Gum*	15	30	700	8	Retain
2190	*Gum*	15	30	500	6	Retain
2191	*Gum*	10	25	400	5	Retain
2192	*Gum*	10	25	400	5	Retain
2195	*Gum*	15	30	500	6	Retain
2196	*Gum*	10	25	500	6	Retain
2197	*Gum*	15	30	500	6	Retain
2198	*Gum*	10	20	500	6	Retain
2200	*Gum*	15	30	600	7	Retain
2202	*Gum*	15	30	600	7	Retain
2203	*Gum*	10	25	500	6	Retain
2204	*Gum*	10	20	500	6	Retain
2205	*Gum*	10	20	400	5	Retain
2206	*Gum*	10	20	400	5	Retain
2207	*Gum*	20	30	800	10	Retain
2208	*Gum*	10	25	500	6	Retain
2209	*Gum*	10	25	400	5	Retain
2210	*Gum*	10	20	400	5	Retain
2211	*Gum*	15	30	600	7	Retain
2212	*Gum*	15	25	500	6	Retain
2213	*Gum*	5	15	300	4	Retain
2214	*Gum*	10	20	400	5	Retain
2215	*Gum*	10	20	400	5	Retain
2216	*Gum*	10	20	400	5	Retain
2217	*Gum*	10	25	300	4	Retain
2218	*Gum*	10	20	400	5	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2219	*Gum*	10	30	500	6	Retain
2220	*Gum*	10	20	300	4	Retain
2221	*Gum*	10	25	400	5	Retain
2222	*Gum*	10	25	400	5	Retain
2223	*Gum*	10	20	400	5	Retain
2224	*Gum*	10	25	300	4	Retain
2225	*Gum*	10	25	450	5	Retain
2226	*Paperbark*	5	15	300	4	Retain
2227	*Gum*	15	30	500	6	Retain
2229	*Gum*	10	25	450	5	Retain
2230	*Gum*	5	15	300	4	Retain
2231	*Gum*	5	15	300	4	Retain
2232	*Gum*	5	15	300	4	Retain
2233	*Gum*	10	25	300	4	Retain
2261	*Gum*	10	15	300	4	Remove
2262	*Gum*	10	15	350	4	Remove
2263	*Gum*	10	15	350	4	Remove
2264	*Gum*	10	15	300	4	Remove
2265	*Gum*	10	15	400	5	Remove
2266	*Gum*	10	15	350	4	Remove
2267	*Gum*	10	15	300	4	Remove
2268	*Gum*	15	20	700	8	Remove
2269	*Gum*	10	15	300	4	Remove
2270	*Gum*	10	15	400	5	Remove
2271	*Gum*	10	15	350	4	Remove
2272	*Gum*	10	15	400	5	Remove
2273	*Paperbark*	10	15	300	4	Remove
2274	*Gum*	10	15	300	4	Remove
2275	*Gum*	15	20	550	7	Remove
2276	*Gum*	10	15	400	5	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2278	*Gum*	10	15	300	4	Remove
2280	*Gum*	10	15	350	4	Remove
2281	*Gum*	10	15	300	4	Remove
2283	*Paperbark*	10	15	300	4	Remove
2284	*Gum*	10	15	300	4	Remove
2285	*Gum*	10	15	300	4	Remove
2286	*Gum*	10	15	350	4	Remove
2287	*Gum*	10	15	300	4	Remove
2288	*Gum*	10	15	300	4	Remove
2289	*Gum*	10	15	300	4	Remove
2290	*Gum*	10	15	300	4	Remove
2292	*Gum*	10	15	550	7	Remove
2293	*Gum*	10	15	300	4	Remove
2295	*Gum*	15	20	500	6	Remove
2296	*Gum*	10	15	350	4	Remove
2297	*Gum*	10	15	400	5	Remove
2298	*Gum*	10	15	300	4	Remove
2299	*Gum*	10	15	300	4	Remove
2300	*Paperbark*	10	15	300	4	Remove
2301	*Gum*	10	15	300	4	Remove
2303	*Gum*	10	15	300	4	Remove
2304	*Gum*	10	15	300	4	Remove
2305	*Gum*	10	15	400	5	Remove
2306	*Gum*	10	15	350	4	Remove
2307	*Gum*	10	15	350	4	Remove
2308	*Gum*	10	15	350	4	Remove
2309	*Gum*	10	15	300	4	Remove
2310	*Gum*	10	15	400	5	Remove
2311	*Gum*	10	15	400	5	Remove
2312	*Gum*	10	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2313	*Gum*	10	15	350	4	Remove
2314	*Gum*	10	15	350	4	Remove
2315	*Gum*	10	15	300	4	Remove
2316	*Paperbark*	10	15	300	4	Remove
2317	*Paperbark*	10	15	300	4	Remove
2318	*Paperbark*	10	15	300	4	Remove
2320	*Gum*	15	15	450	5	Remove
2321	*Gum*	10	15	300	4	Remove
2322	*Gum*	15	20	550	7	Remove
2323	*Gum*	15	20	550	7	Remove
2324	*Gum*	10	15	300	4	Remove
2326	*Gum*	10	15	300	4	Remove
2327	*Gum*	10	15	300	4	Remove
2328	*Gum*	10	15	400	5	Remove
2329	*Gum*	15	15	450	5	Remove
2331	*Gum*	15	15	650	8	Remove
2332	*Gum*	10	15	450	5	Remove
2334	*Gum*	10	15	350	4	Remove
2335	*Gum*	15	20	500	6	Remove
2336	*Gum*	10	15	300	4	Remove
2337	*Gum*	10	15	300	4	Remove
2338	*Gum*	15	20	1000	12	Remove
2339	*Gum*	10	15	350	4	Remove
2340	*Gum*	10	15	400	5	Remove
2341	*Gum*	10	15	300	4	Remove
2342	*Gum*	10	15	350	4	Remove
2343	*Gum*	15	15	600	7	Remove
2344	*Gum*	10	15	350	4	Remove
2345	*Gum*	10	15	300	4	Remove
2346	*Gum*	10	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2347	*Gum*	10	15	300	4	Remove
2348	*Gum*	10	15	350	4	Remove
2349	*Paperbark*	10	15	350	4	Remove
2350	*Gum*	10	15	300	4	Remove
2351	*Gum*	10	15	300	4	Remove
2352	*Gum*	10	15	350	4	Remove
2353	*Gum*	10	15	300	4	Remove
2354	*Gum*	10	15	350	4	Remove
2355	*Gum*	10	15	350	4	Remove
2356	*Gum*	10	15	400	5	Remove
2357	*Gum*	10	20	700	8	Remove
2358	*Gum*	10	15	350	4	Remove
2359	*Gum*	10	15	300	4	Remove
2360	*Gum*	10	15	450	5	Remove
2361	*Gum*	10	15	450	5	Remove
2362	*Gum*	10	20	450	5	Remove
2363	*Gum*	10	20	500	6	Remove
2364	*Gum*	10	15	300	4	Remove
2365	*Paperbark*	10	15	300	4	Remove
2366	*Gum*	10	15	300	4	Remove
2367	*Gum*	10	15	450	5	Remove
2368	*Gum*	10	15	450	5	Remove
2369	*Gum*	10	15	300	4	Remove
2370	*Gum*	10	15	450	5	Remove
2371	*Gum*	10	15	450	5	Remove
2372	*Gum*	15	20	550	7	Remove
2373	*Gum*	10	15	450	5	Remove
2374	*Gum*	10	15	350	4	Remove
2375	*Gum*	10	15	400	5	Remove
2376	*Gum*	10	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2377	*Paperbark*	10	15	300	4	Remove
2379	*Gum*	10	15	350	4	Remove
2380	*Gum*	10	15	350	4	Remove
2381	*Gum*	10	15	300	4	Remove
2382	*Gum*	10	15	300	4	Remove
2383	*Gum*	10	15	350	4	Remove
2384	*Gum*	10	15	450	5	Remove
2385	*Gum*	15	20	450	5	Remove
2386	*Gum*	10	15	300	4	Remove
2387	*Gum*	10	15	300	4	Remove
2388	*Gum*	10	15	350	4	Remove
2389	*Gum*	10	15	350	4	Remove
2390	*Gum*	10	15	300	4	Remove
2392	*Gum*	10	15	400	5	Remove
2393	*Gum*	10	15	300	4	Remove
2394	*Gum*	10	15	300	4	Remove
2395	*Gum*	10	15	350	4	Remove
2396	*Paperbark*	10	15	300	4	Remove
2397	*Gum*	10	15	300	4	Remove
2398	*Gum*	10	15	300	4	Remove
2399	*Paperbark*	10	15	300	4	Remove
2400	*Gum*	10	15	400	5	Remove
2401	*Gum*	10	15	350	4	Remove
2402	*Paperbark*	10	15	350	4	Remove
2403	*Gum*	10	15	300	4	Remove
2404	*Gum*	10	15	300	4	Remove
2405	*Gum*	10	15	300	4	Remove
2407	*Gum*	10	15	300	4	Remove
2408	*Paperbark*	10	15	400	5	Remove
2409	*Gum*	10	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2410	*Gum*	10	15	450	5	Remove
2411	*Paperbark*	10	15	300	4	Remove
2412	*Paperbark*	10	15	300	4	Remove
2413	*Gum*	10	15	400	5	Remove
2414	*Gum*	10	15	300	4	Remove
2415	*Gum*	10	15	300	4	Remove
2416	*Paperbark*	10	15	300	4	Remove
2417	*Gum*	10	15	400	5	Remove
2418	*Gum*	10	15	300	4	Remove
2419	*Gum*	10	15	400	5	Remove
2420	*Gum*	10	15	300	4	Remove
2426	*Gum*	10	15	300	4	Remove
2427	*Gum*	10	15	400	5	Remove
2428	*Gum*	10	15	400	5	Remove
2429	*Gum*	10	15	400	5	Remove
2430	*Gum*	10	15	400	5	Remove
2431	*Gum*	2	15	400	5	Remove
2432	*Gum*	15	20	600	7	Remove
2433	*Gum*	10	15	400	5	Remove
2434	*Gum*	10	15	400	5	Remove
2435	*Gum*	10	15	450	5	Remove
2436	*Gum*	10	15	450	5	Remove
2437	*Gum*	15	20	500	6	Remove
2438	*Gum*	10	15	300	4	Remove
2439	*Gum*	10	15	450	5	Remove
2440	*Gum*	10	15	300	4	Remove
2441	*Gum*	10	15	350	4	Remove
2442	*Gum*	10	15	450	5	Remove
2443	*Gum*	10	15	350	4	Remove
2444	*Gum*	15	20	1200	14	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2445	*Gum*	10	15	300	4	Remove
2447	*Gum*	10	15	400	5	Remove
2448	*Gum*	10	15	450	5	Remove
2449	*Gum*	10	15	300	4	Remove
2450	*Gum*	10	15	300	4	Remove
2451	*Gum*	10	15	300	4	Remove
2452	*Gum*	10	15	350	4	Remove
2453	*Gum*	10	15	300	4	Remove
2456	*Gum*	10	15	400	5	Remove
2457	*Gum*	10	15	300	4	Remove
2458	*Gum*	5	15	350	4	Remove
2459	*Gum*	10	15	300	4	Remove
2460	*Gum*	10	15	300	4	Remove
2462	*Gum*	10	15	300	4	Remove
2463	*Gum*	10	15	450	5	Remove
2464	*Gum*	10	15	500	6	Remove
2466	*Gum*	10	15	300	4	Remove
2468	*Gum*	10	15	300	4	Remove
2469	*Gum*	10	15	350	4	Remove
2470	*Gum*	10	15	400	5	Remove
2471	*Gum*	10	15	450	5	Remove
2472	*Paperbark*	10	15	300	4	Remove
2473	*Gum*	10	15	300	4	Remove
2474	*Gum*	10	15	300	4	Remove
2475	*Gum*	10	15	300	4	Remove
2476	*Ironbark*	4	8	300	4	Retain
2478	*Gum*	6	13	800	10	Retain
2480	*Paperbark*	3	5	300	4	Retain
2481	*Ironbark*	3.5	6	300	4	Retain
2482	*Paperbark*	4	8	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2483	*Ironbark*	4	8	300	4	Retain
2484	*Gum*	5	12	350	4	Retain
2485	*Ironbark*	3.5	9	300	4	Retain
2486	*Ironbark*	3.5	9	300	4	Retain
2487	*Ironbark*	3.5	9	300	4	Retain
2488	*Ironbark*	6	12	400	5	Retain
2489	*Ironbark*	4	9	350	4	Retain
2490	*Ironbark*	4	8	300	4	Retain
2492	*Ironbark*	8	14	450	5	Retain
2494	*Ironbark*	5	10	400	5	Retain
2495	*Gum*	6	15	600	7	Retain
2496	*Paperbark*	3.5	11	300	4	Retain
2498	*Ironbark*	3	8	300	4	Retain
2499	*Ironbark*	4	9	400	5	Retain
2500	*Ironbark*	4	9	400	5	Retain
2501	*Ironbark*	4	9	400	5	Retain
2502	*Ironbark*	3	7	300	4	Retain
2503	*Ironbark*	3	9	300	4	Retain
2504	*Ironbark*	3	9	300	4	Retain
2505	*Ironbark*	3	9	300	4	Retain
2506	*Ironbark*	4	8	350	4	Retain
2508	*Ironbark*	4	8	350	4	Retain
2509	*Paperbark*	4	8	350	4	Retain
2510	*Paperbark*	3.5	8	300	4	Retain
2511	*Ironbark*	4	12	350	4	Retain
2512	*Ironbark*	4	12	350	4	Retain
2513	*Ironbark*	3	9	300	4	Retain
2514	*Ironbark*	3	7	300	4	Retain
2515	*Paprbark*	2.5	7	300	4	Retain
2516	*Ironbark*	3	7	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2517	*Paperbark*	3	7	300	4	Retain
2518	*Ironbark*	3.5	7	300	4	Retain
2521	*Ironbark*	3	9	300	4	Retain
2523	*Ironbark*	3	9	300	4	Retain
2524	*Ironbark*	3	8	300	4	Retain
2525	*Ironbark*	3	8	300	4	Retain
2526	*Ironbark*	3	8	300	4	Retain
2527	*Ironbark*	3	9	300	4	Retain
2529	*Ironbark*	3	7	300	4	Retain
2530	*Ironbark*	3	7	300	4	Retain
2531	*Gum*	8	14	800	10	Retain
2532	*Ironbark*	3	9	300	4	Retain
2533	*Gum*	8	14	800	10	Retain
2534	*Ironbark*	3	9	300	4	Retain
2535	*Paperbark*	3	10	300	4	Remove
2537	*Ironbark*	3.5	10	300	4	Remove
2538	*Ironbark*	3.5	10	300	4	Remove
2539	*Ironbark*	3.5	10	350	4	Remove
2540	*Gum*	7	12	600	7	Retain
2541	*Gum*	7	12	450	5	Retain
2542	*Ironbark*	4	10	300	4	Retain
2545	*Gum*	6	12	750	9	Retain
2546	*Gum*	8	13	800	10	Retain
2547	*Gum*	6	10	800	10	Retain
2548	*Gum*	7.5	13	800	10	Retain
2549	*Gum*	6	10	600	7	Retain
2550	*Ironbark*	3	10	300	4	Retain
2552	*Ironbark*	4	8	300	4	Retain
2554	*Gum*	8	14	900	11	Retain
2556	*Ironbark*	5	12	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2557	*Ironbark*	3	8	300	4	Retain
2558	*Ironbark*	4	9	300	4	Retain
2560	*Gum*	6	12	800	10	Retain
2562	*Ironbark*	3	8	300	4	Retain
2563	*Gum*	6	11	600	7	Retain
2565	*Gum*	6	12	800	10	Retain
2566	*Ironbark*	3.5	8	300	4	Retain
2567	*Gum*	8	11	700	8	Retain
2569	*Gum*	7.5	12	900	11	Retain
2571	*Gum*	4.5	9	500	6	Retain
2572	*Gum*	5	11	600	7	Retain
2573	*Gum*	8	12	800	10	Retain
2574	*Paperbark*	4	9	300	4	Retain
2575	*Ironbark*	3	10	300	4	Retain
2576	*Ironbark*	3	10	300	4	Retain
2577	*Ironbark*	3	10	300	4	Retain
2579	*Gum*	6	10	550	7	Retain
2580	*Gum*	4	10	400	5	Retain
2581	*Gum*	5	11	550	7	Retain
2582	*Gum*	8	13	800	10	Retain
2584	*Ironbark*	3	7	300	4	Retain
2586	*Gum*	6	10	750	9	Retain
2587	*Gum*	5.5	11	800	10	Remove
2588	*Ironbark*	3.5	9	300	4	Remove
2589	*Ironbark*	4	11	350	4	Retain
2590	*Ironbark*	4	11	350	4	Retain
2591	*Gum*	5	12	500	6	Retain
2592	*Gum*	9	15	900	11	Retain
2593	*Gum*	4	10	450	5	Retain
2594	*Gum*	4	11	400	5	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2595	*Gum*	6	12	700	8	Retain
2596	*Ironbark*	3.5	9	300	4	Retain
2597	*Gum*	3.5	11	300	4	Retain
2598	*Gum*	5	11	400	5	Retain
2599	*Ironbark*	3	8	300	4	Retain
2600	*Ironbark*	3	8	300	4	Retain
2601	*Ironbark*	3	9	300	4	Retain
2602	*Gum*	6	10	550	7	Retain
2603	*Ironbark*	3.5	8	300	4	Retain
2604	*Gum*	4	9	400	5	Retain
2605	*Gum*	4.5	9	400	5	Retain
2606	*Ironbark*	5	9	350	4	Retain
2607	*Ironbark*	6	12	600	7	Retain
2608	*Paperbark*	5	10	450	5	Retain
2609	*Gum*	5	11	500	6	Retain
2610	*Ironbark*	3	8	350	4	Retain
2611	*Ironbark*	3	9	400	5	Retain
2612	*Gum*	5.5	10	600	7	Retain
2613	*Ironbark*	3.5	10	300	4	Retain
2614	*Gum*	6	11	700	8	Retain
2615	*Gum*	6	11	450	5	Retain
2616	*Gum*	6	11	500	6	Retain
2617	*Gum*	4.5	9	350	4	Retain
2618	*Gum*	4.5	9	350	4	Retain
2619	*Gum*	4.5	9	350	4	Retain
2620	*Gum*	4	10	350	4	Retain
2621	*Ironbark*	2.5	10	350	4	Retain
2623	*Ironbark*	5	11	350	4	Retain
2624	*Ironbark*	5	11	300	4	Retain
2626	*Gum*	6	10	600	7	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2627	*Ironbark*	3.5	10	350	4	Retain
2628	*Ironbark*	3.5	10	300	4	Retain
2629	*Ironbark*	3	10	300	4	Retain
2630	*Ironbark*	3.5	10	350	4	Retain
2631	*Ironbark*	4	11	350	4	Retain
2632	*Gum*	5	12	450	5	Remove
2633	*Ironbark*	3.5	11	400	5	Retain
2634	*Paperbark*	3	9	350	4	Retain
2635	*Paperbark*	3	9	300	4	Retain
2636	*Ironbark*	4	10	300	4	Retain
2637	*Ironbark*	3.5	10	300	4	Retain
2638	*Gum*	4	10	450	5	Retain
2639	*Gum*	5.5	11	450	5	Retain
2640	*Gum*	6	12	400	5	Remove
2641	*Gum*	6.5	12	400	5	Remove
2642	*Paperbark*	3.5	8	300	4	Remove
2643	*Paperbark*	3.5	10	300	4	Remove
2644	*Ironbark*	5	10	350	4	Remove
2645	*Ironbark*	4	9	300	4	Remove
2647	*Ironbark*	3.5	9	300	4	Remove
2648	*Ironbark*	3.5	10	350	4	Remove
2650	*Ironbark*	3	9	300	4	Remove
2651	*Gum*	5	9	300	4	Remove
2653	*Gum*	4	8	300	4	Remove
2654	*Gum*	3.5	12	800	10	Remove
2655	*Gum*	3	10	300	4	Remove
2656	*Gum*	8	10	400	5	Remove
2657	*Ironbark*	3	10	300	4	Retain
2658	*Gum*	6	11	350	4	Retain
2660	*Paperbark*	2	8	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2661	*Paperbark*	2	8	300	4	Remove
2662	*Paperbark*	2	10	300	4	Remove
2664	*Ironbark*	5	11	350	4	Retain
2665	*Ironbark*	3	9	300	4	Remove
2666	*Ironbark*	0.5	9	300	4	Remove
2668	*Ironbark*	2.5	8	300	4	Remove
2669	*Ironbark*	2	8	300	4	Retain
2670	*Ironbark*	3.5	10	300	4	Retain
2671	*Ironbark*	4	11	300	4	Retain
2672	*Ironbark*	4	9	300	4	Remove
2673	*Ironbark*	3	8	300	4	Remove
2674	*Ironbark*	4	9	300	4	Remove
2675	*Ironbark*	5	11	350	4	Remove
2676	*Ironbark*	3	9	300	4	Remove
2677	*Ironbark*	5	10	300	4	Remove
2678	*Ironbark*	3	10	300	4	Remove
2679	*Ironbark*	3.5	9	300	4	Remove
2680	*Gum*	8	12	800	10	Retain
2681	*Gum*	6	10	600	7	Remove
2683	*Gum*	7	10	500	6	Remove
2684	*Ironbark*	5	9	300	4	Remove
2685	*Gum*	6	10	450	5	Remove
2686	*Ironbark*	3	8	300	4	Remove
2687	*Paperbark*	2	9	300	4	Remove
2688	*Paperbark*	3	9	300	4	Remove
2689	*Gum*	4	10	300	4	Remove
2690	*Ironbark*	5	11	350	4	Remove
2691	*Gum*	7	10	350	4	Remove
2692	*Ironbark*	4	10	300	4	Remove
2694	*Gum*	5	11	550	7	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2695	*Paperbark*	2.5	8	300	4	Remove
2696	*Ironbark*	4	9	400	5	Remove
2697	*Ironbark*	3	9	300	4	Remove
2698	*Ironbark*	3	9	300	4	Remove
2699	*Ironbark*	4	9	300	4	Remove
2700	*Gum*	7	11	500	6	Remove
2701	*Ironbark*	3.5	9	300	4	Remove
2702	*Gum*	5	10	500	6	Remove
2703	*Ironbark*	3	7	300	4	Remove
2704	*Gum*	4	9	400	5	Remove
2705	*Gum*	8	11	600	7	Remove
2707	*Paperbark*	3	7	300	4	Remove
2709	*Paperbark*	2	8	300	4	Remove
2711	*Ironbark*	5	10	400	5	Remove
2712	*Ironbark*	3.5	10	400	5	Remove
2713	*Gum*	6	11	600	7	Remove
2714	*Paperbark*	4	9	300	4	Remove
2715	*Gum*	5	10	400	5	Remove
2716	*Ironbark*	3	10	300	4	Remove
2717	*Ironbark*	3	8	300	4	Remove
2718	*Ironbark*	2.5	8	300	4	Remove
2720	*Gum*	5	9	400	5	Remove
2721	*Ironbark*	4	7	300	4	Remove
2722	*Ironbark*	4	9	300	4	Remove
2724	*Ironbark*	4	8	300	4	Remove
2725	*Ironbark*	3	9	300	4	Remove
2726	*Ironbark*	3	9	300	4	Remove
2727	*Gum*	6	11	300	4	Remove
2728	*Ironbark*	3.5	10	300	4	Remove
2729	*Ironbark*	3.5	10	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2730	*Gum*	6	12	450	5	Remove
2731	*Ironbark*	3.5	10	300	4	Remove
2732	*Ironbark*	3.5	9	300	4	Remove
2734	*Ironbark*	4	10	300	4	Remove
2735	*Ironbark*	3	10	300	4	Remove
2736	*Ironbark*	3	10	300	4	Remove
2737	*Ironbark*	4	10	350	4	Remove
2738	*Ironbark*	3	12	300	4	Remove
2739	*Ironbark*	4	10	300	4	Remove
2740	*Paperbark*	3.5	10	300	4	Remove
2742	*Paperbark*	2.5	10	350	4	Remove
2743	*Paperbark*	2.5	10	300	4	Remove
2744	*Ironbark*	3	9	300	4	Remove
2745	*Paperbark*	4	9	350	4	Remove
2746	*Paperbark*	3	8	300	4	Remove
2747	*Ironbark*	3.5	7	300	4	Remove
2748	*Gum*	7	13	800	10	Remove
2749	*Gum*	5	10	400	5	Remove
2750	*Gum*	5	10	450	5	Remove
2751	*Gum*	7	11	600	7	Remove
2753	*Ironbark*	4	10	350	4	Remove
2754	*Paperbark*	3	9	300	4	Remove
2755	*Ironbark*	1.5	9	300	4	Remove
2756	*Ironbark*	3	10	300	4	Remove
2757	*Ironbark*	3.5	10	300	4	Remove
2758	*Ironbark*	2.5	10	400	5	Remove
2759	*Ironbark*	4	9	300	4	Remove
2760	*Ironbark*	3.5	11	300	4	Remove
2761	*Ironbark*	3.5	11	300	4	Remove
2762	*Ironbark*	3.5	11	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2763	*Gum*	8	13	850	10	Remove
2765	*Gum*	5	20	300	4	Retain
2766	*Gum*	5	20	300	4	Retain
2768	*Gum*	10	30	600	7	Retain
2769	*Gum*	15	30	600	7	Retain
2771	*Gum*	10	25	400	5	Retain
2772	*Gum*	5	15	300	4	Retain
2773	*Gum*	5	20	300	4	Retain
2774	*Gum*	5	15	300	4	Retain
2775	*Gum*	10	20	400	5	Retain
2776	*Gum*	10	20	400	5	Retain
2777	*Gum*	10	20	500	6	Retain
2778	*Gum*	5	15	400	5	Retain
2779	*Gum*	5	15	300	4	Retain
2780	*Gum*	5	15	300	4	Retain
2782	*Gum*	10	25	500	6	Retain
2784	*Gum*	15	25	700	8	Retain
2785	*Gum*	10	25	400	5	Retain
2786	*Gum*	5	15	300	4	Retain
2787	*Gum*	10	25	500	6	Retain
2788	*Gum*	10	20	400	5	Retain
2789	*Gum*	10	20	400	5	Retain
2790	*Gum*	10	30	600	7	Retain
2791	*Gum*	15	30	700	8	Retain
2792	*Gum*	15	30	700	8	Retain
2793	*Gum*	5	15	300	4	Retain
2794	*Gum*	15	30	600	7	Retain
2795	*Gum*	5	15	300	4	Retain
2796	*Gum*	5	15	300	4	Retain
2798	*Gum*	10	20	400	5	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2799	*Gum*	15	30	500	6	Retain
2801	*Gum*	10	20	400	5	Retain
2802	*Gum*	10	30	600	7	Retain
2803	*Gum*	5	15	400	5	Retain
2804	*Gum*	5	15	400	5	Retain
2805	*Gum*	15	30	500	6	Retain
2806	*Gum*	15	30	600	7	Retain
2807	*Gum*	15	30	600	7	Retain
2808	*Gum*	5	20	500	6	Retain
2809	*Gum*	5	20	500	6	Retain
2811	*Gum*	10	25	400	5	Retain
2812	*Gum*	10	25	400	5	Retain
2813	*Gum*	5	15	300	4	Retain
2816	*Gum*	10	25	400	5	Retain
2817	*Gum*	5	20	300	4	Retain
2818	*Gum*	10	20	500	6	Retain
2819	*Gum*	5	15	300	4	Retain
2820	*Gum*	5	15	300	4	Retain
2821	*Gum*	10	25	500	6	Retain
2822	*Gum*	5	20	300	4	Retain
2823	*Gum*	15	30	600	7	Retain
2824	*Gum*	5	15	300	4	Retain
2826	*Gum*	10	20	400	5	Retain
2827	*Gum*	10	25	500	6	Retain
2828	*Gum*	5	20	400	5	Retain
2829	*Gum*	10	25	500	6	Retain
2830	*Gum*	15	30	600	7	Retain
2831	*Gum*	10	30	500	6	Retain
2832	*Gum*	5	20	300	4	Retain
2833	*Gum*	15	30	700	8	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2834	*Gum*	15	30	500	6	Retain
2835	*Gum*	15	30	500	6	Retain
2838	*Gum*	10	25	400	5	Retain
2839	*Gum*	10	25	400	5	Retain
2840	*Gum*	10	25	400	5	Retain
2841	*Gum*	10	25	400	5	Retain
2842	*Gum*	5	20	300	4	Retain
2843	*Gum*	5	20	300	4	Retain
2844	*Gum*	5	20	300	4	Retain
2845	*Gum*	5	20	300	4	Retain
2846	*Gum*	5	20	300	4	Retain
2847	*Gum*	5	20	300	4	Retain
2848	*Gum*	5	20	300	4	Retain
2849	*Gum*	5	20	400	5	Retain
2850	*Gum*	5	15	300	4	Retain
2851	*Gum*	10	20	500	6	Retain
2852	*Gum*	5	20	400	5	Retain
2853	*Gum*	5	15	300	4	Retain
2854	*Gum*	10	30	600	7	Retain
2855	*Gum*	5	15	300	4	Retain
2856	*Gum*	15	30	700	8	Retain
2857	*Native*	5	15	300	4	Retain
2858	*Gum*	5	15	300	4	Retain
2859	*Gum*	5	20	400	5	Retain
2860	*Gum*	10	25	400	5	Retain
2861	*Gum*	10	20	400	5	Retain
2862	*Gum*	5	15	300	4	Retain
2863	*Gum*	5	20	400	5	Retain
2864	*Gum*	10	20	400	5	Retain
2865	*Gum*	5	15	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2866	*Gum*	5	20	400	5	Retain
2867	*Gum*	10	20	400	5	Retain
2868	*Gum*	5	20	400	5	Retain
2869	*Gum*	5	15	300	4	Retain
2870	*Gum*	5	20	300	4	Retain
2871	*Gum*	5	20	400	5	Retain
2873	*Gum*	5	15	300	4	Retain
2874	*Gum*	5	20	400	5	Retain
2875	*Gum*	5	20	400	5	Retain
2876	*Gum*	10	20	400	5	Retain
2877	*Gum*	10	20	400	5	Retain
2878	*Gum*	5	15	300	4	Retain
2879	*Gum*	5	15	300	4	Retain
2880	*Gum*	15	30	600	7	Retain
2881	*Gum*	5	20	400	5	Retain
2882	*Gum*	10	25	500	6	Retain
2883	*Gum*	10	25	400	5	Retain
2885	*Gum*	5	15	300	4	Retain
2886	*Gum*	10	25	500	6	Retain
2887	*Gum*	15	30	600	7	Retain
2889	*Gum*	5	20	400	5	Retain
2890	*Gum*	10	20	400	5	Remove
2892	*Gum*	5	15	300	4	Retain
2893	*Gum*	10	25	500	6	Retain
2894	*Gum*	5	15	300	4	Retain
2895	*Gum*	5	15	300	4	Retain
2897	*Gum*	5	20	300	4	Retain
2898	*Gum*	5	20	400	5	Retain
2899	*Gum*	10	30	600	7	Retain
2900	*Gum*	10	25	400	5	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2901	*Gum*	10	25	500	6	Remove
2903	*Gum*	15	30	600	7	Remove
2904	*Gum*	15	30	500	6	Remove
2905	*Gum*	10	20	500	6	Remove
2906	*Gum*	5	20	300	4	Remove
2907	*Gum*	10	25	500	6	Retain
2909	*Gum*	5	15	300	4	Retain
2912	*Gum*	5	15	300	4	Remove
2913	*Gum*	5	15	400	5	Remove
2915	*Gum*	10	25	450	5	Remove
2916	*Gum*	5	15	400	5	Retain
2917	*Gum*	5	15	300	4	Retain
2918	*Gum*	5	15	300	4	Retain
2919	*Gum*	5	20	400	5	Retain
2920	*Gum*	10	25	450	5	Retain
2921	*Gum*	5	15	300	4	Retain
2922	*Gum*	10	30	600	7	Retain
2923	*Gum*	10	25	450	5	Retain
2924	*Gum*	10	20	400	5	Retain
2925	*Gum*	5	15	400	5	Retain
2926	*Gum*	15	30	800	10	Retain
2927	*Gum*	10	25	400	5	Retain
2928	*Gum*	10	25	400	5	Retain
2929	*Gum*	10	20	400	5	Retain
2930	*Gum*	10	20	400	5	Retain
2931	*Gum*	5	20	300	4	Retain
2932	*Gum*	10	25	500	6	Retain
2933	*Gum*	10	25	500	6	Retain
2934	*Gum*	10	20	400	5	Retain
2935	*Gum*	10	20	400	5	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2936	*Gum*	15	30	700	8	Retain
2937	*Gum*	5	15	300	4	Retain
2938	*Gum*	10	20	400	5	Retain
2939	*Gum*	10	25	800	10	Retain
2940	*Gum*	5	20	400	5	Retain
2941	*Gum*	5	15	400	5	Retain
2943	*Gum*	5	15	300	4	Retain
2944	*Gum*	10	25	450	5	Retain
2947	*Gum*	5	15	300	4	Retain
2948	*Gum*	10	30	500	6	Retain
2949	*Gum*	5	20	400	5	Retain
2951	*Gum*	5	15	300	4	Retain
2952	*Gum*	10	20	400	5	Retain
2954	*Gum*	5	20	300	4	Retain
2955	*Gum*	10	20	300	4	Retain
2956	*Gum*	15	30	600	7	Retain
2957	*Gum*	5	10	300	4	Retain
2958	*Gum*	5	20	400	5	Retain
2959	*Gum*	15	25	600	7	Retain
2960	*Gum*	5	15	300	4	Retain
2961	*Gum*	5	15	300	4	Retain
2962	*Gum*	5	15	300	4	Retain
2963	*Gum*	5	15	300	4	Retain
2964	*Gum*	5	15	300	4	Retain
2965	*Gum*	10	20	400	5	Remove
2966	*Gum*	10	30	500	6	Remove
2967	*Paperbark*	5	15	300	4	Remove
2968	*Gum*	5	20	400	5	Remove
2969	*Gum*	10	25	500	6	Remove
2970	*Gum*	15	30	600	7	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
2971	*Gum*	10	15	300	4	Remove
2972	*Gum*	10	25	500	6	Remove
2973	*Gum*	15	30	600	7	Remove
2975	*Gum*	15	30	600	7	Remove
2976	*Gum*	10	25	400	5	Remove
2978	*Gum*	10	25	400	5	Remove
2979	*Paperbark*	5	15	300	4	Remove
2980	*Gum*	10	20	400	5	Remove
2981	*Gum*	5	20	400	5	Remove
2982	*Gum*	10	25	500	6	Remove
2983	*Paperbark*	5	15	300	4	Remove
2984	*Gum*	10	30	600	7	Retain
2985	*Gum*	10	25	500	6	Retain
2986	*Gum*	10	30	500	6	Retain
2987	*Gum*	5	15	300	4	Retain
2988	*Gum*	15	30	700	8	Retain
2989	*Gum*	5	10	300	4	Retain
2990	*Gum*	10	20	400	5	Retain
2991	*Gum*	15	30	700	8	Retain
2992	*Gum*	5	15	300	4	Retain
2993	*Gum*	5	15	300	4	Retain
2994	*Gum*	15	30	700	8	Retain
2995	*Gum*	10	20	400	5	Retain
2996	*Gum*	10	20	400	5	Retain
2997	*Gum*	5	15	300	4	Retain
2998	*Gum*	5	20	400	5	Retain
2999	*Gum*	15	20	400	5	Retain
3000	*Gum*	10	20	400	5	Retain
3001	*Gum*	10	20	400	5	Retain
3002	*Gum*	5	15	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
3003	*Gum*	10	20	500	6	Retain
3004	*Gum*	10	25	400	5	Retain
3005	*Gum*	5	10	400	5	Retain
3006	*Gum*	15	20	400	5	Retain
3007	*Gum*	10	20	400	5	Retain
3008	*Gum*	5	15	300	4	Retain
3009	*Gum*	5	15	300	4	Retain
3011	*Gum*	10	25	500	6	Retain
3012	*Gum*	5	15	400	5	Retain
3013	*Gum*	15	30	600	7	Remove
3014	*Gum*	15	30	600	7	Remove
3015	*Gum*	10	25	450	5	Remove
3016	*Gum*	5	15	300	4	Remove
3017	*Gum*	5	15	300	4	Retain
3018	*Paperbark*	5	15	300	4	Retain
3019	*Paperbark*	5	15	300	4	Remove
3020	*Paperbark*	5	15	300	4	Remove
3021	*Paperbark*	5	15	300	4	Remove
3022	*Gum*	15	30	700	8	Remove
3023	*Paperkark*	5	15	300	4	Remove
3024	*Gum*	10	25	500	6	Remove
3025	*Gum*	5	15	300	4	Remove
3026	*Gum*	5	15	300	4	Remove
3028	*Gum*	5	15	300	4	Remove
3029	*Gum*	10	30	700	8	Remove
3030	*Gum*	5	15	300	4	Remove
3031	*Gum*	5	20	300	4	Remove
3032	*Gum*	5	20	300	4	Remove
3033	*Paperbark*	5	15	300	4	Remove
3034	*Paperbark*	5	15	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
3035	*Gum*	10	25	400	5	Remove
3036	*Gum*	5	20	300	4	Remove
3037	*Gum*	5	15	300	4	Remove
3038	*Gum*	10	25	400	5	Remove
3039	*Paperbark*	10	20	700	8	Remove
3040	*Paperbark*	5	15	300	4	Remove
3041	*Paperbark*	5	15	300	4	Remove
3042	*Paperbark*	5	15	300	4	Remove
3043	*Gum*	15	30	600	7	Remove
3044	*Gum*	10	20	400	5	Remove
3045	*Gum*	10	20	400	5	Remove
3046	*Gum*	10	20	400	5	Remove
3047	*Gum*	10	25	400	5	Remove
3048	*Gum*	5	20	300	4	Remove
3049	*Gum*	5	20	300	4	Remove
3050	*Gum*	10	25	400	5	Remove
3051	*Gum*	10	20	400	5	Remove
3052	*Gum*	10	20	300	4	Retain
3053	*Gum*	10	20	300	4	Retain
3054	*Gum*	5	15	300	4	Retain
3055	*Gum*	5	20	400	5	Retain
3056	*Gum*	5	20	400	5	Retain
3058	*Gum*	15	25	500	6	Retain
3059	*Paperbark*	5	20	400	5	Retain
3060	*Gum*	15	30	600	7	Retain
3061	*Gum*	5	15	300	4	Retain
3062	*Gum*	5	15	300	4	Retain
3063	*Gum*	5	15	300	4	Retain
3064	*Gum*	5	20	400	5	Retain
3065	*Gum*	5	15	300	4	Retain

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
3066	*Gum*	15	30	700	8	Retain
3067	*Gum*	5	15	300	4	Retain
3068	*Gum*	5	15	300	4	Retain
3069	*Gum*	5	15	300	4	Retain
3070	*Gum*	10	20	400	5	Retain
3071	*Gum*	5	15	300	4	Retain
3072	*Gum*	5	20	400	5	Retain
3073	*Gum*	5	20	400	5	Retain
3074	*Gum*	10	20	500	6	Retain
3075	*Gum*	5	15	400	5	Remove
3076	*Gum*	5	20	400	5	Remove
3077	*Gum*	5	15	300	4	Retain
3078	*Gum*	5	15	400	5	Retain
3079	*Gum*	10	20	400	5	Remove
3080	*Gum*	5	15	300	4	Remove
3081	*Gum*	10	25	500	6	Remove
3083	*Gum*	5	15	300	4	Remove
3084	*Gum*	5	15	300	4	Remove
3085	*Gum*	5	15	300	4	Remove
3086	*Gum*	5	15	300	4	Remove
3087	*Gum*	5	15	300	4	Remove
3088	*Gum*	10	25	500	6	Remove
3089	*Gum*	10	25	400	5	Remove
3090	*Gum*	10	25	500	6	Remove
3091	*Gum*	10	25	400	5	Remove
3092	*Gum*	10	20	300	4	Remove
3093	*Gum*	10	20	400	5	Remove
3094	*Gum*	15	25	500	6	Remove
3095	*Gum*	10	20	300	4	Remove
3096	*Paperbark*	10	20	400	5	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
3097	*Gum*	5	15	300	4	Remove
3098	*Paperbark*	5	15	300	4	Remove
3100	*Paperbark*	5	15	300	4	Remove
3101	*Gum*	10	25	600	7	Remove
3102	*Gum*	15	25	600	7	Remove
3104	*Paperbark*	5	15	300	4	Remove
3105	*Gum*	15	25	600	7	Remove
3106	*Gum*	15	25	600	7	Remove
3107	*Gum*	10	25	400	5	Remove
3108	*Paperbark*	5	15	300	4	Remove
3109	*Gum*	10	25	400	5	Remove
3110	*Paperbark*	5	15	300	4	Remove
3111	*Paperbark*	5	15	300	4	Remove
3112	*Gum*	10	30	500	6	Remove
3113	*Paperbark*	5	15	300	4	Remove
3114	*Gum*	10	20	400	5	Remove
3115	*Gum*	5	15	300	4	Remove
3116	*Gum*	15	30	500	6	Remove
3117	*Gum*	10	25	600	7	Remove
3118	*Gum*	10	25	500	6	Remove
3119	*Gum*	10	20	400	5	Remove
3120	*Gum*	10	20	400	5	Remove
3121	*Gum*	5	15	300	4	Remove
3122	*Gum*	5	15	300	4	Remove
3124	*Gum*	10	25	500	6	Remove
3125	*Paperbark*	5	15	300	4	Remove
3126	*Paperbark*	10	20	400	5	Remove
3127	*Gum*	5	15	300	4	Remove
3128	*Gum*	10	25	400	5	Remove
3129	*Gum*	5	20	300	4	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
3130	*Gum*	5	20	300	4	Remove
3131	*Gum*	5	20	400	5	Remove
3132	*Paperbark*	5	15	300	4	Remove
3133	*Paperbark*	5	15	300	4	Remove
3134	*Paperbark*	5	15	400	5	Remove
3135	*Paperbark*	5	15	300	4	Remove
3136	*Paperbark*	5	15	400	5	Remove
3137	*Paperbark*	5	15	300	4	Remove
3138	*Paperbark*	5	15	300	4	Remove
3139	*Gum*	15	30	800	10	Remove
3140	*Gum*	10	25	400	5	Remove
3141	*Gum*	10	25	400	5	Remove
3142	*Gum*	15	25	700	8	Remove
3143	*Gum*	15	25	500	6	Remove
3144	*Gum*	5	15	300	4	Remove
3145	*Gum*	10	25	500	6	Remove
3146	*Gum*	10	25	400	5	Remove
3147	*Gum*	5	15	300	4	Remove
3148	*Gum*	5	15	300	4	Remove
3149	*Gum*	15	30	600	7	Remove
3150	*Gum*	10	20	400	5	Remove
3151	*Gum*	15	25	600	7	Remove
3152	*Gum*	5	15	400	5	Remove
3153	*Gum*	5	15	400	5	Remove
3154	*Gum*	10	25	400	5	Remove
3155	*Paperbark*	5	15	300	4	Remove
3156	*Gum*	10	20	400	5	Remove
3157	*Gum*	10	20	400	5	Remove
3158	*Gum*	10	25	500	6	Remove
3159	*Gum*	15	25	600	7	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
3160	*Gum*	10	20	400	5	Remove
3162	*Paperbark*	5	15	300	4	Remove
3163	*Paperbark*	5	15	300	4	Remove
3164	*Paperbark*	10	20	400	5	Remove
3165	*Gum*	10	25	300	4	Remove
3166	*Gum*	5	20	400	5	Remove
3167	*Gum*	10	20	500	6	Remove
3168	*Gum*	15	30	600	7	Remove
3169	*Gum*	10	25	400	5	Remove
3170	*Gum*	5	15	300	4	Remove
3171	*Gum*	10	25	400	5	Remove
3172	*Gum*	10	20	400	5	Remove
3173	*Paperbark*	5	20	400	5	Remove
3174	*Gum*	10	25	500	6	Remove
3175	*Gum*	15	25	500	6	Remove
3176	*Paperbark*	5	15	300	4	Remove
3177	*Gum*	10	20	500	6	Remove
3178	*Paperbark*	5	15	400	5	Remove
3179	*Paperbark*	5	15	300	4	Remove
3180	*Gum*	5	20	400	5	Remove
3181	*Paperbark*	5	15	400	5	Remove
3182	*Paperbark*	5	15	300	4	Remove
3183	*Gum*	10	25	500	6	Remove
3186	*Gum*	5	15	300	4	Remove
3187	*Gum*	5	15	400	5	Remove
3189	*Gum*	15	25	500	6	Remove
3190	*Gum*	5	20	400	5	Remove
3191	*Gum*	5	15	300	4	Remove
3192	*Gum*	5	15	300	4	Remove
3194	*Gum*	10	20	500	6	Remove

Specimen Details						
Tree ID	Tree Type	Spread (m)	Height (m)	DBH (mm)	TPZ (m)	Retention
3195	*Gum*	5	20	300	4	Remove
3196	*Gum*	5	20	400	5	Remove
3197	*Gum*	5	15	800	10	Remove
3198	*Gum*	5	15	400	5	Remove
3199	*Gum*	5	20	300	4	Remove
3200	*Gum*	5	20	300	4	Remove
3201	*Gum*	10	20	400	5	Remove
3202	*Gum*	5	15	300	4	Remove
3203	*Paperbark*	5	15	400	5	Remove
3204	*Gum*	10	30	500	6	Remove
3205	*Gum*	5	20	300	4	Remove
3206	*Gum*	5	20	300	4	Remove
3207	*Gum*	5	20	300	4	Remove
3208	*Gum*	10	20	400	5	Remove
3209	*Gum*	5	15	300	4	Remove
3210	*Gum*	5	20	400	5	Remove
3211	*Gum*	5	20	400	5	Remove
3212	*Gum*	5	15	300	4	Remove
3213	*Gum*	10	20	300	4	Remove
3214	*Gum*	5	20	400	5	Remove