

environmental management



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Government

Mirvac

Greater Flagstone Project



Natural Environment Site Strategy

**PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL**

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Reports and/or Plans by Others

Reports and/or plans by others may be included within this Natural Environment Site Strategy to support the document.



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Plan 7:	Indicative Development Interface to Retained Vegetation – Section BB
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I. Introduction

1.1. Requirements of site strategy

This Natural Environment Site Strategy (NESS) has been lodged with the initial application for **Mirvac's** Greenbank Project. While not in response to approval conditions (no approvals in place), this NESS has been prepared based on anticipated requirements with reference to a number of approvals issued in the area and based on feedback from **Economic Development Queensland**. The following components are included within this NESS:

- i. outline measures to conserve and enhance the site's biodiversity values (areas of ecological significance, waterways and vegetation management);
- ii. identify strategies to avoid, minimise and mitigate the clearing of remnant vegetation containing endangered regional ecosystems where proven by ground truthing to be viable;
- iii. identify management plans to be provided to address the clearing of non-viable remnant vegetation containing endangered regional ecosystems;
- iv. identify rehabilitation strategies for any corridors of native vegetation to improve habitat extent and wildlife movement;
- v. identify any buffering to areas of Significant Biodiversity Values and which have associated conservation, biodiversity, habitat or scenic amenity values;
- vi. identify strategies for fauna and flora management of the site, and determine corridors, proposed road crossing designs for expected fauna utilisation and rehabilitation areas (such as for koala habitat);
- vii. Detail the measures outlining how and when Koala habitat obligations for the Greater Flagstone PDA as detailed in the PDA Guideline No. 17 Remnant Vegetation and Koala Habitat Obligation in Greater Flagstone and Yarrabilba PDAs will be delivered;
- viii. identify strategies to prevent land degradation and the management of dispersive/sodic soils;
- ix. identify strategies to rehabilitate major watercourses;
- x. identify strategies for bushfire management;
- xi. identify strategies for pest and weed management;
- xii. identify strategies for monitoring vegetation rehabilitation; and
- xiii. identify strategies for rehabilitation of stream banks of major watercourse areas to create riparian stability for major corridors through the Potential Eco-Lot residential and Conservation Parkland Precincts.

1.2. This overarching site strategy, as amended from time to time, is intended to guide future development decisions in relation to the **Mirvac** Greenbank Site.



Administration Definitions

1.3. In this site strategy:

Developer	means an entity with effective control of the development of a parcel of land within the Application Area.
Application Area	Refer to Plan 1 in Appendix 1 .
Guideline 14	means PDA Guideline no. 14 for Environmental values and sustainable resource use (May 2015)
Guideline 17	means PDA Guideline no. 17 for Remnant vegetation and koala habitat obligations in Greater Flagstone and Yarrabilba PDAs (August 2014)
ICOP	means the Infrastructure Charging Offset Plan Greater Flagstone Urban Development Area (July 2013).
EDQ	means the Minister for Economic Development Queensland established under the Economic Development Act 2012, which supersedes the Urban Land Development Authority and repeals the Urban Land Development Authority Act 2007 (Qld)
PDA Development Scheme	means the Greater Flagstone Urban Development Area Development Scheme (October 2011)



2. Structure

2.1. This site strategy is to be read in conjunction with the reports, Whole of Site Strategies and Infrastructure Master Plans referenced in the Context Plan(s) over the relevant parts of the Application Area (and subsequent revisions and addendums to the same).

2.2. This Overarching Site Strategy for the management of the Natural Environment is set out in the following structure:





3. Guidelines and Relevant Information

3.1. This Natural Environment Site Strategy (NESS) is prepared within the parameters of Guideline 14 and Guideline 17. Site specific alterations or legislative departures from the above are outlined in **Section 3** and **Section 4** of this NESS.

3.2. The Application Area contains ground-truthed endangered regional ecosystems along the eastern portion of the land holdings. Refer to **Plan 2 (Appendix 1)** for the certified Property Map of Assessable Vegetation (PMAV) that shows the regional ecosystems rectified on-site. **Plan 3 (Appendix 1)** shows rectification of regional ecosystems mapping for a second PMAV which has been lodged with **NRM**.

3.3. The Application Area contains koala habitat areas, defined in Guideline 17 as:

An area mapped on State Planning Policy 2/10: Koala Conservation in South East Queensland, SEQ Koala Protection Area Koala Habitat Values maps as:

- bushland habitat; or
- having high and medium value suitable for rehabilitation habitat types.

Refer to **Plan 4 (Appendix 1)** for the current Koala Habitat Values Mapping.

3.4. It is noted that the Koala Habitat Values Mapping covering the Application Area was completed at the GIS level. **Section 7** of this NESS includes a process and method for amendment of Koala Habitat Values Mapping that is generally consistent with the process and method for amendments to mapping under Division 9 of the South East Queensland Koala Conservation State Planning Regulatory Provisions (Queensland Government, May 2010) (Koala SPRP).

3.5. References (including references in Guideline 14 and Guideline 17) to an Act, policy, mapping or other document shall be applied as the Act, policy, mapping or document as at 17 March 2016 or as specified herein.

3.6. At the time of submission of the NESS an *Environment Protection & Biodiversity Conservation Act 1999* (EPBC Act) Controlled Action Status Referral was underway. If, through this proposal, an alternative offset outcome is conditioned for a prescribed matter of National Environmental Significance, this is considered to take



precedence over any State Government offset or obligation for the same prescribed matter (i.e. the State Government will not require an offset or obligation for the same prescribed matter).

- 3.7. No offsets are required for matters of local environmental significance.
- 3.8. Site and project specific Bushfire Hazard Assessments and Management Plans will be prepared and submitted for endorsement / approval. The outcomes and requirements of these plans will consider the strategies adopted in this NESS.
- 3.9. Notwithstanding any of the requirements of this NESS, the Developer will not be required to perform any rectification works to parts of the site which have been transferred / dedicated to other parties and accepted off maintenance.



4. Strategies

4.3 Natural Environment Site Strategies – Conservation Parkland and Development Land

Site strategies have been developed to manage environmental and development outcomes for all land included within this application area, excluding the Future Investigation Area which is subject to further assessment in future. It is intended that the NESS will be amended to include the Future Investigation Area in future (if required). The site strategies include 6 columns listed as Element, Overall Outcomes, Strategies / Actions, Design Standards / Resources, Timing (Indicative) and Achievement Criteria. Mirvac is responsible for the implementation, monitoring and reporting for all site strategies. For some elements (e.g. confirmed viable endangered remnant vegetation), strategy outcomes are identical for both land use areas. For other elements, strategies vary significantly.

For each element, the avoid, minimise, mitigate and restore or offset hierarchy has been adopted. It is noted that the Mirvac Greater Flagstone Project NESS is not preceded by a higher level approval and thus does not link each strategy back to an approval condition as per the majority of NESS operated in the PDA.

Conservation Parkland

The following Overall Outcomes and Design Standards apply to works within and adjoining the Conservation Parkland:

- Secure and dedicate/transfer to Council a robust and sustainable portion of the site retaining the highest quality ecological values for conservation parkland purposes.
- Consolidate the environmental area into Council's surrounding conservation assets.
- Undertake ecological restoration and waterway stability measures prior to dedication to Council.
- Allow for controlled passive nature based recreational uses as occurring and permissible within adjoining Council conservation parklands

Development Land

The Development Land is defined as the balance site area which is not included in the Conservation Parkland or Future Investigation Area. The majority of this area will be developed to a minimum net residential density of 15dw/ha, however there may be opportunities to retain environmental values in open space subject to earthworks and servicing requirements. It is noted that development at this density is generally prohibitive of the retention of major or functional areas of environmental values. Note, this whole of site strategy seeks to retain the highest ecological values in Conservation Parkland and the Future Investigation Area. The latter does not form part of this NESS or application.

The following Overall Outcomes and Design Standards apply to the Development Land:

- Ensure systems and processes for assessment, reporting, protection and management are based on leading practice ecological guidelines and relevant legislative frameworks.
- Explore and detail specific opportunities to retain ecological features throughout the site by incorporating detailed environmental data into the site design process.
- Outlines the legislative requirements for all potential or actual threatened plants and animals as scheduled at the State Government and Commonwealth Government Level.

Natural Environment Site Strategies



Element	Overall Outcomes	Strategies / Actions	Design Standards / Resources	Timing (Indicative)	Achievement Criteria
Survey, Identification & Reporting	1. Identify Significant Biodiversity Values within and adjoining the Development Land	- Robust field surveys (appropriately timed and conducted for expected biodiversity). - Desktop assessments using local, state and commonwealth environment databases and mapping. - Use the information surveyed and identified in the Significant Biodiversity Values assessment to prioritise environmental features.	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: - Guideline 14 - PDA Development Scheme - State and Commonwealth survey guidelines including: - EPBC Significant Impact Guidelines, including specific guidelines for expected species - DSITIA Terrestrial Vertebrate Fauna Survey Guidelines - NCA Protected Plants Flora Survey Guidelines - Database and mapping references including: - EPBC PMST Database - EHP Wildlife Online Database - EHP NCA Protected Plants Mapping - NRM Regulated Vegetation Management Mapping - Koala SPRP Mapping - SARA Mapping - SPP Biodiversity Values Mapping	Context Plan or RoL application	Context Plan and RoL applications are accompanied by Significant Biodiversity Values Assessment Reports
Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems	1. Retain and protect Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems	- Development and infrastructure avoids the clearing of Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems. - Development minimises impacts on Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems by providing buffers, ideally inclusive of road, between the Development Areas and any retained Confirmed Areas of Remnant Vegetation containing Endangered Regional Ecosystems. - Development enhances areas of Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems by providing for weed management and rehabilitation within the Conservation Parkland.	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: - Guideline 14 - Guideline 17 - SDAP Module 8 - DSDIP Significant Residual Impact Guideline - Approved Site Property Map of Assessable Vegetation (PMAV) - EOP - EPBC Act permit - NRM Self Assessable Guidelines for land management and exemption checklist Plans 6 & 7 (Appendix 1) – indicative buffer/setback cross sections	Site design and continuing through stages of approved construction.	Areas of Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems are retained or increased at the completion of the project.



Element	Overall Outcomes	Strategies / Actions	Design Standards / Resources	Timing (Indicative)	Achievement Criteria
		Stretch Target: Use weed management and rehabilitation of cleared and modified areas to achieve a net increase in the area of Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems within the Conservation Parkland.			
Other Vegetation	1. Development protects and minimises impacts on native vegetation within and supporting Significant Biodiversity Values.	▪ Avoid (to the greatest extent possible) the clearing of non-endangered remnant, regrowth and other native vegetation, including non-juvenile koala habitat trees within the land designated Conservation Parkland. ▪ Unavoidable clearing can only occur for essential community infrastructure within the Conservation Parkland, where this infrastructure cannot be reasonably located elsewhere. ▪ Where unavoidable clearing for essential community infrastructure is required within the Conservation Parkland rehabilitate impacted areas in accordance with SEQ restoration guidelines. ▪ Through site and earthworks, maximise the retention of non-endangered remnant vegetation, regrowth and healthy isolated native tree species within waterway corridors and future recreation / open space areas (where not in conflict with the purpose and use of the open space or other required infrastructure) within the development land. • Stage and minimise the clearing of trees for areas designated under the plan of development as schools, future park, drainage and buffer until preliminary concepts for these areas have been prepared and clearing extents identified.	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: ▪ Guideline 14 ▪ Guideline 17 ▪ EPBC Act permit ▪ DSDIP Significant Residual Impact Guideline ▪ Approved Site Property Map of Assessable Vegetation (PMAV) ▪ NRM Self Assessable Guidelines for land management and exemption checklist. ▪ SDAP Module 8 ▪ Easement rights ▪ Site Bushfire Management Plan. ▪ Plan 4 (Appendix 1) ▪ Draft Code of Practice for the Welfare of Wild Animals affected by Land Clearing ▪ SEQ Ecological Restoration Framework Code ▪ SEQ Ecological Restoration Framework Guide ▪ SEQ Ecological Restoration Framework Manual	Site design and continuing through stages of approved construction. Annual Report	An increase in the volume of vegetation to be included in the site's Significant Biodiversity Values at completion of the project. An increase in the Projective Foliage Cover (PFC) of canopy trees and quality condition of shrub and ground cover layers within the Conservation parkland by completion of the project (when measured against pre-commencement baseline surveys – reported on annually)



Element	Overall Outcomes	Strategies / Actions	Design Standards / Resources	Timing (Indicative)	Achievement Criteria
		Prepare Management Plans in accordance with the Reporting and Management Section of this NESS to stage and manage the impacts of clearing.			
Koala	- Minimise clearing of Non-Juvenile Koala Habitat Trees (NJKHT) and provide obligations in accordance with IG17 to achieve a net gain in koala habitat for the region. - Minimise threats to existing local koala populations by avoiding conflicts with roads and dogs.	- Avoid (to the greatest extent possible) the removal of NJKHT within the Conservation Parkland. Unavoidable clearing of NJKHT within the Conservation Parkland can only occur for essential community infrastructure, where this infrastructure cannot be reasonably located elsewhere. - Where unavoidable clearing for essential community infrastructure is necessary within the Conservation Parkland, all works are managed in accordance with the Reporting and Management Section of this NESS. - Ensure site design of open space and retained waterway areas within the Development Land minimises the clearing of NJKHT where they can be connected to the Conservation Parkland. - Minimise impacts of the clearing of NJKHT through the Development Land by staging and sequencing works commencing in the western disturbed areas and flushing towards the eastern retained areas. - Stage and manage the impacts of clearing NJKHT in accordance with the Reporting and Management Section of this NESS. - Provide obligations in accordance with IG17 to achieve a net gain in koala habitat for the region for any removed NJKHT from the High and Medium Value – Suitable for Rehabilitation and all Bushland Habitat Mapping categories (or deliver any Approved Environmental Offsets conditioned by the Commonwealth Department of Environment under the EPBC Act) - Ensure site design provides for safe koala linkage opportunities to surrounding off-site	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: - EPBC Koala Referral Guidelines - Nature Conservation (Koala) Conservation Plan 2006 and Management Program 2006-2016 (koala plan) - EHP Koala Sensitive Design Guideline - Main Roads Fauna Sensitive Design Manual Vol.2 - Draft Code of Practice for the Welfare of Wild Animals affected by Land Clearing - EPBC Act permit	Site design and continuing through stages of approved construction. Annual Report	Increase in the volume of NJKHT within the Conservation Parkland (Measured at the 5 and 10 year interval) No temporary fragments or islands of koala NJKHT within clearing zones for the life of the project (reported annually)



Element	Overall Outcomes	Strategies / Actions	Design Standards / Resources	Timing (Indicative)	Achievement Criteria
		habitat by discouraging Koala movement into built up areas through a range of Koala sensitive design measures (fencing, signage, road and landscape design). ▪ Incorporate dog off-leash facilities in recreation parkland and on lead control measures through the Conservation Parkland.			
EVNT Species	1. Identify and avoid (to the greatest extent possible) any impacts on EVNT species.	• Avoid clearing of EVNT plant species. • Ensure appropriate pre-clearance checks and fauna spotter reporting provides a contemporary and more detailed review of EVNT Species or potential habitat within each stage of clearing. Stretch Target • Where suitable within and adjoining the Conservation Parkland, waterway corridors or open space areas incorporate areas of <i>Melaleuca irbyana</i> and or other habitat reinstatement for EVNT Species.	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: ▪ NCA Protected Plants Exemption Process. ▪ Fauna Spotter Pre-Clearance and Post Works Reporting ▪ SEQ Ecological Restoration Framework Code ▪ SEQ Ecological Restoration Framework Guide ▪ SEQ Ecological Restoration Framework Manual	Site design and continuing through stages of approved construction. Annual reporting	Increase in volume of EVNT species within the Conservation Parkland at completion of the project. Increase in the availability of habitat and usage of the Conservation Parkland by fauna when compared with benchmark pre-commencement surveys.
Native Fauna (non EVNT Species)	1. Minimise impacts on native fauna (not scheduled as Threatened)	▪ Avoid negative impacts on native fauna species in areas designated Conservation Parkland. ▪ Consolidate habitat for all native fauna into non development portions of the site (i.e. Conservation Parkland and supporting areas). ▪ Minimise impacts of the clearing through the Development Land through staging and sequencing and Management Plans prepared in accordance with the Reporting and Management Section of this NESS to stage and manage the impacts of clearing. ▪ Where specific habitat features (such as mature habitat trees retaining hollows) need to be removed, complete an audit of lost	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: ▪ Fauna Management Plan prepared in accordance with the Draft Code of Practice for the Welfare of Wild Animals affected by Land Clearing ▪ SEQ Ecological Restoration Framework Code ▪ SEQ Ecological Restoration Framework Guide ▪ SEQ Ecological Restoration Framework Manual	Site design and continuing through stages of approved construction. Summarised through Annual Reporting	Fauna Spotter / Catcher pre, during and post clearing reports completed for each stage of clearing works. Evidence within the NESS annual report of adaptive management procedural change within Fauna Spotter / Catcher Reports for each stage of the project.



Element	Overall Outcomes	Strategies / Actions	Design Standards / Resources	Timing (Indicative)	Achievement Criteria
		habitat features. Use the audit to determine a strategy to harvest habitat features and/or design and implement a species specific nest box implementation plan as part of the FMP. Engage a registered fauna spotter for a pre-clearance report and advice on clearing and sequencing methods within the Development Land. Stage and manage the impacts of clearing in accordance with the Reporting and Management Section of this NESS.			
Waterways & drainage Features	1. Retain, protect and buffer site watercourses forming part of the projects Significant Biodiversity Values	- Avoid (to the greatest extent possible) any clearing within mapped watercourses, drainage features, overland flow paths or other natural hydrological features within the Conservation Parkland Area. - Avoid (to the greatest extent possible) any clearing within identified waterways forming part of the site's Significant Biodiversity Values within or adjoining the Development Land. (Plan 8) - Where unavoidable clearing (e.g. access where no other alternative exists, essential community infrastructure and/or approved waterway stability measures) is required within: - mapped watercourses, drainage features, overland flow paths or other natural hydrological features within the Conservation Parkland; or - identified waterways forming part of the site's Significant Biodiversity Values within or adjoining the Development Land; minimise the clearing footprint, mitigate impacts and compensate through ecological restoration measures.	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: - SDAP Module 8 - DAF Mapping - DAF WWBW Self Assessable Codes - SEQ Ecological Restoration Framework Code - SEQ Ecological Restoration Framework Guide - SEQ Ecological Restoration Framework Manual - CPTED Guidelines for Queensland	Site design and continuing through stages of approved construction. Within each specific Management Plan (Vegetation, Fauna and Weed)	Watercourses identified as Significant Biodiversity Values are retained through site design. Bio-condition of site watercourses retained as part of Significant Biodiversity Values are increased at completion of the project.



Element	Overall Outcomes	Strategies / Actions	Design Standards / Resources	Timing (Indicative)	Achievement Criteria
		- Where unavoidable clearing is necessary within: - mapped watercourses, drainage features, overland flow paths or other natural hydrological features within the Conservation Parkland; or - identified waterways forming part of the site's Significant Biodiversity Values within or adjoining the Development Land; - ensure that all works are managed in accordance with the Reporting and Management Section of this NESS. - Minimise impacts on identified waterways forming part of the site's Significant Biodiversity Values (Plan 7) through appropriately designed and located buffers. - Explore infrastructure designed to incorporate existing vegetation with storm water solutions through modified drainage features throughout the development portions and recreational parklands.			
Land Degradation	1. Avoid and manage land degradation impacts caused through works within areas of dispersive and sodic soils.	- Avoid (to the greatest extent possible) any clearing within identified waterways forming part of the site's Significant Biodiversity Values within or adjoining the Development Land. (Plan 8) - Avoid (to the greatest extent possible) clearing on steep terrain greater than 20%. Where clearing on steep terrain is unavoidable, employ machinery and clearing techniques which minimise disturbance to soils. - Minimise clearing of any natural drainage features within the Development Land where	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: - SDAP Module 8 - DAF WWBW Self Assessable Codes - SEQ Ecological Restoration Framework Code - SEQ Ecological Restoration Framework Guide - SEQ Ecological Restoration Framework Manual - CPTED Guidelines for Queensland - Endorsed / approved site strategies and infrastructure master plans for: - Earthworks - Stormwater	Site design and continuing through stages of approved construction.	No indirect impacts from soil deposition or erosion in the downstream Significant Biodiversity Values areas.



Element	Overall Outcomes	Strategies / Actions	Design Standards / Resources	Timing (Indicative)	Achievement Criteria
		included as part of open space, drainage channels, or the future school. ▪ Mitigate the impacts of clearing of any drainage features, overland flow paths or other natural hydrological features through inclusion of detailed erosion and sediment control plan for each stage of self-certified operational works submissions. ▪ Dispersive soil mitigation measures are to be implemented during detailed design if required (such as vegetation or protection of batters, minimising velocity of stormwater flows, flattening of grades, stormwater detention, stormwater discharge into erosion resistant areas, soil re-compaction, soil stabilisers (chemical polymers) and use of sandstone/barriers). ▪ Carry out water testing of site watercourses (where there are flows at the time). Testing will be for turbidity and total suspension solids to monitor any sediment deposits in the waterways.			
Rehabilitation / Restoration	1. Expand and improve the quality of Significant Biodiversity Values and other retained natural features.	▪ Revegetate and restore to remnant status all cleared, degraded and modified areas within the Conservation Parkland, where not in conflict with bushfire management requirements or passive based nature recreation infrastructure. ▪ Undertake rehabilitation (including planting of endemic species and weed management) within the bed and banks of retained or modified watercourses and drainage features. This rehabilitation may be utilised as part of the total site storm water management strategies, particularly with regard to stormwater quality and waterway stability.	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: ▪ SEQ Ecological Restoration Framework Code ▪ SEQ Ecological Restoration Framework Guide ▪ SEQ Ecological Restoration Framework Manual ▪ Endorsed / approved site strategies and infrastructure master plans for: ○ Open space ○ Stormwater	Site design and continuing through stages of approved construction.	Increased quality in the condition of retained areas when measured against pre-commencement benchmarks.



Element	Overall Outcomes	Strategies / Actions	Design Standards / Resources	Timing (Indicative)	Achievement Criteria
		- Reuse cleared native vegetation (e.g. as site mulch in future revegetation works in and adjoining the Conservation Parkland). - Explore the harvesting of the A-horizon of healthy bushland areas within the development precinct for assisted natural regeneration within degraded land through and surrounding the Conservation Parkland. Stretch Target: - Wherever practical, research and incorporate EVNT Species (plants) and TECs into site revegetation.			
Weed and Pest Species	1. Decrease in the volume and diversity of site weed and pest species.	- Identify and map major infestations of environmental and declared weeds which will be targeted for removal through the Conservation Parkland. - Prepare detailed weed management and rehabilitation plans for areas of Conservation Parkland (including re-vegetation using existing native species and pre-clear regional ecosystem communities) to strengthen the riparian vegetation cover and diversity through retained creek tributaries and gully lines. - Manage weeds and pests in accordance with the requirements of the LPA. - Prepare detailed weed management and rehabilitation plans for all portions of open space and waterways relative to the stage in which they are proposed to be created. - Explore methods to minimise impacts of domestic animals on core environmental features surrounding the community (such as by implementing educational and control measures for areas of the project adjoining or	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: - Guideline 14 - LPA declared weeds and pests - SEQ Ecological Restoration Framework Code - SEQ Ecological Restoration Framework Guide - SEQ Ecological Restoration Framework Manual	Pre-Construction Certification and / or Self Certification. Reporting as per purpose specific management or rehabilitation plan. Summary reporting as part of annual report.	Decrease in the extent and diversity of site weed species on-site (measured annually for the life of the project)



Element	Overall Outcomes	Strategies / Actions	Design Standards / Resources	Timing (Indicative)	Achievement Criteria
		with the potential to influence the Conservation Parkland).			
Monitoring, Management Plans & Reporting	Ensure monitoring, management and reporting collect adequate information to contribute towards the avoid, minimise, restore and offset principles of this NESS.	- Monitoring/reporting to occur as per requirements of each VMP (e.g. photo monitoring, tree health, assessment post works). - Monitoring and reporting to occur as per the requirements of each specific weed management and rehabilitation plan (e.g. photo monitoring, quadrant and transect surveys etc.) showing reductions in site weed cover and expanded vegetation area. - Monitoring and reporting to occur as per the requirement of each specific FMP, incorporating the reporting requirements of the engaged fauna spotter. - Prepare Vegetation Management Plans (VMPs) for each phase of clearing works incorporating requirements of AS 4970-2009. - VMPs are to be approved by: - self-certification where prepared in accordance with AS 4970 -2009 and external to Significant Biodiversity Values areas; or - compliance assessment for unavoidable clearing within Significant Biodiversity Values areas. - Prepare Fauna Management Plans (FMPs) for each stage of development involving vegetation clearing works. FMPs are to mandate the use of EHP registered fauna spotters. - FMPs are to be approved by self-certification where prepared in accordance with the Draft Code of Practice for the Welfare of Wild Animals affected by Land-Clearing.	Where suitable, parts of the following documents and standards will assist in measuring the Overall Outcome: - Guideline 14 - Regulated Vegetation Management Mapping, PMAV and Pre-Clear Mapping - Management plan specific monitoring and reporting requirements. - Draft Code of Practice for the Welfare of Wild Animals affected by Land Clearing - Australian Standard (AS) 4970 -2009 Protection of trees on development sites. - DSDIP Significant Residual Impact Guideline - EOP - EPBC Act permit. - SEQ Ecological Restoration Framework Code - SEQ Ecological Restoration Framework Guide - SEQ Ecological Restoration Framework Manual	All stages – reported annually (until project completion)	Annual evidence monitoring, management and reporting measures have used findings to contribute to the adaptive management of all other NESS site procedures.



Element	Overall Outcomes	Strategies / Actions	Design Standards / Resources	Timing (Indicative)	Achievement Criteria
		▪ Prepare and implement Weed Management and Rehabilitation Plans for retained vegetation areas, drainage tributaries and other existing or reinstated vegetation areas. ▪ Create a data repository of all environmental surveys, reports, management plans and monitoring data to inform future government and non-government decision making in the Greater Flagstone and broader areas.			



5. Natural Environmental Features

5.1. At the whole of site scale, core natural environment features include:

- Confirmed Remnant Vegetation Containing Endangered Regional Ecosystems
- Low Order Remnant Vegetation
- Confirmed Waterway Areas
- Other Drainage Features and Watercourses
- Waterway buffer areas
- Site farm dams
- Areas of juvenile native vegetation

5.2. Each of these core features is detailed on **Plan 8 (Appendix 1)** and briefly described below.

- a) Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems

A certified Property Map of Vegetation (PMAV) has been provided from the **Queensland Department of Natural Resources and Mines (NRM)** which substantially alters the previous Remnant Regional Ecosystem Mapping for the site.

- b) Low Order Remnant Vegetation

As part of the PMAV process, areas of Of Concern and Least Concern (Non Endangered) Remnant Vegetation have been expanded on site. These areas primarily occur within the development zone with the exception of areas in the eastern third of the property. While not being protected specifically by Guideline 14 and Guideline 17 these vegetated areas escalate in importance when combined with other constraints (e.g. – on a Confirmed Waterway Area).

- c) Confirmed Waterway Areas

Confirmed Waterway Areas reflect drainage features on-site which recorded consistent features and values to be defined as a waterway under the *Fisheries Act 1994*. These areas displayed more evidence of conveying run-off and areas of greater diversity through mesic variants to the broader habitats in which they are contained.

- d) Waterway Buffer Area

A 25m nominal buffer has been applied to Confirmed Waterway Areas identified during site survey. **This is measured as 25m either side of the centreline of the Confirmed Waterway Area.**

- e) Site Farm Dams

Two large and a number of smaller farm dams have been constructed over the site. Generally, site dams occur in the western and more disturbed and active portions of the project site.



f) Areas of Juvenile Native Regeneration

A number of Category X areas retain dense immature native regrowth. These areas vary diversely in health and value.

6. Ongoing Monitoring and Reporting

- 6.1 Ongoing monitoring of achievement of the Natural Environment Site Strategies will occur in accordance with specific management plans (e.g. as specified in VMPs, FMPs, Rehabilitation Plans, etc.).
- 6.2 The Developer undertakes to complete monitoring and reporting in accordance with each approved management plan.
- 6.3 Further specific methods for monitoring and reporting will be developed where required in conjunction with Context Plans, Plans of Development, and Compliance Submissions.
- 6.4 This document has been prepared with consideration of adaptive management principles being adopted into each report and management plan prepared over the project. This NESS sets the overarching outcome and achievement metric for measurement in stage or works specific documents.



7. Koala Habitat Values Mapping

7.1 Koala Habitat Values Mapping can be amended through the use of the following methods which are generally consistent with the Koala SPRP and the accompanying Koala SPRP Guideline:

Determination of koala habitat type for certain land

1. As part of or prior to the lodgement of a development application, an applicant may request the assessment manager to make a determination that land, which is part of that development application, is of a different koala habitat type than the koala habitat type shown for the land on the Map of Assessable Development Area Koala Habitat Values.
2. An applicant who makes a request must provide sufficient information, and (if requested) as part of the response to the information request, for the assessment manager to make the determination.
3. Sufficient information includes, but is not limited to, a report by a suitably-qualified and experienced professional in respect of the habitat located on, and in connection with, the land for which the determination is requested.
4. An assessment manager who receives a request may determine, as part of its decision, that any part of the land the subject of the request is:
 - a. of a koala habitat type different to that shown on a Map of Assessable Development Area Koala Habitat Values; or
 - b. an area where koalas are generally not present.
5. The assessment manager may only make the determination where it is reasonably satisfied that the koala habitat type associated with the relevant land is identified on the Map of Assessable Development Area Koala Habitat Values incorrectly.
6. A determination is determinative of the koala habitat type, which applies to the land the subject of the determination for the purpose of applying any rules, guidelines, offsets or other considerations relating to the koala species.
7. Further guidance on the technical information and considerations to be incorporated into an application for a redetermination of the koala habitat values maps can be drawn from the Koala SPRP Guideline.



8. Definitions / References / Acronyms

Term / Acronym		Definition	Date	Author / Organisation
Application Area	means	the land parcels identified in Plan 1 (Appendix 1)		
AS 4970-2009	means	<i>Australian Standard AS4970-2009 Protection of trees on development sites (incorporating Amendment No. 1)</i>	Mar 2010	Standards Australia
AS	means	Australian Standards		
ASRIS	means	Australian Soil Resource Information System		
Category B Vegetation	means	as defined by the <i>Vegetation Management Act 1999</i> , section 20A.		
Category X Vegetation	means	as defined by the <i>Vegetation Management Act 1999</i> , section 20A.		
Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems	means	Remnant Vegetation containing Endangered Regional Ecosystems mapped and as annotated on Plan 8 (Appendix 1) and as defined in Guideline 14 (Appendix 1) as areas of viable remnant vegetation containing endangered regional ecosystems as shown on the regional ecosystem map prepared under the <i>Vegetation Management Act 1999</i> and confirmed by on-site investigations using a methodology accepted by the MEDQ.		
Confirmed Waterway Areas	means	Confirmed Waterway Areas as shown on Plan 8 (Appendix 1)		
Conservation Parkland	means	land designated as Conservation Parkland on an endorsed / approved Context Plan for the Application Area		



Context Plan	means	a context plan as contemplated under Section 3.2.8 of the PDA Development Scheme		
CPTED	means	Crime Prevention through Environmental Design		
CPTED Guidelines for Queensland	means	Crime Prevention through Environmental Design- Guidelines for Queensland - Part B: Implementation Guide	Oct 2007	State of Queensland
DAF	means	Department of Agriculture and Fisheries (Qld)		
DAF Mapping	means	<i>Fisheries Act 1994</i> Queensland waterways for waterway barrier works spatial layer (QSpatial)	15 Jan 2013	State of Queensland
DAF WWBW Self Assessable Codes	means	Self- assessable codes for waterway barrier works by DAF including: WWBW01-P1: Construction of minor dams and weirs, WWBW01-P2: Replacement of existing floodgates, WWBW01-P3: Construction and maintenance of culverts, WWBW01-P4: Construction and maintenance of bed level crossings, WWBW02: Temporary waterway barrier works, WWBW03: Regularly constructed temporary waterway barrier works		State of Queensland (Department of Agriculture and Fisheries)
Defining Bank	means	as defined in State Development Assessment Provisions Module 8: Native Vegetation Clearing (version 1.7) as meaning: the bank which confines seasonal flows by may be inundated by flooding from time to time. This can be either: 1. The bank of terrace that confines the water before the point of flooding, or 2. Where there is no bank the seasonal high water line which represents the point of flooding."		
Development Land	means	The part of the Application Area occupied by land uses other than Conservation Parkland and the Potential Residential – Eco Lot precinct Future Investigation Area.		



DILGP	means	Department of Infrastructure, Local Government and Planning (Qld)		
DoE	means	Department of the Environment (Cth)		
Draft Code of Practice for the Welfare of Wild Animals affected by Land-Clearing	means	Queensland Code of Practice for the welfare of wild animals affected by land-clearing and other habitat impacts and wildlife spotter / catchers (Draft)	2009	Jon Hanger & Ben Nottidge - Australian Wildlife Hospital
Drainage feature	means	as defined in State Development Assessment Provisions Module 8: Native Vegetation Clearing (version 1.7) as meaning: "is a natural landscape feature, including a gully, drain, drainage depression or other erosion feature that – 9 Is formed by the concentration of, or operates to confine or concentrate, overland flow during water and immediately after rainfall events; and 10 Flows for only a short duration after a rainfall event, regardless of the frequency of flow events; and 11 Commonly does not have enough continuing flow to create a riverine environment, and 12 Is shown on the vegetation management watercourse and drainage feature map 12.1 At a scale of 1:25000 on the vegetation management watercourse and drainage feature map for the local government areas of Brisbane, Moreton Bay, Gold Coast, Sunshine Coast, Logan and Redlands, excluding applications to clear vegetation for extractive industries."		
DSDIP	means	Department of State Development Infrastructure and Planning (Qld) (now Department of Local Government, Infrastructure and Planning)		
DSDIP Significant Residual Impact Guideline	means	Significant Residual Impact Guideline - For matters of state environmental significance and prescribed activities assessable under the Sustainable Planning Act 2009 - Queensland Environmental Offsets Policy	Dec 2014	State of Queensland (Department of State Development,



				Infrastructure and Planning)
DSITIA	means	Department of Science, Information Technology, Innovation and the Arts (Qld)		
DSITIA Terrestrial Vertebrate Fauna Survey Guidelines	means	Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (v 2.0)	Nov 2014	State of Queensland (Department of Science, Information Technology, Innovation and the Arts)
EDQ	means	the Minister for Economic Development Queensland established under the <i>Economic Development Act 2012</i> , which supersedes the <i>Urban Land Development Authority and repeals the Urban Land Development Authority Act 2007</i> (Qld)		
EHP	means	Department of Environment and Heritage Protection (Qld)		
EHP Koala Sensitive Design Guideline	means	Koala-sensitive Design Guideline- A guide to koala-sensitive design measures for planning and development activities	Nov 2012	State of Queensland (Department of Environment and Heritage Protection)
EHP NCA Protected Plants Mapping	means	<i>Nature Conservation Act 1992</i> protected plants flora survey trigger map spatial layer (QSpatial)		State of Queensland (Department of Environment and Heritage Protection)
EHP Wildlife Online Database	means	Queensland Government's WildNet data species profile search (version 1.0) database		State of Queensland (Department of Environment and Heritage Protection)
Endangered Vegetation	means	as mapped by Regulated Vegetation Management Mapping under the <i>Vegetation Management Act 1999</i> or by a certified Property Map of Assessable Vegetation.		



EOA	means	<i>Environmental Offsets Act 2014 (Qld)</i>	02 July 2015	State of Queensland
Environmental Offsets Act 2014	means	<i>Environmental Offsets Act 2014 (Qld)</i>	02 July 2015	State of Queensland
Environmental Offsets Policy 2014	means	<i>Queensland Environmental Offsets Policy (Version 1.1)</i>	December 2014	State of Queensland
EOP	means	<i>Queensland Environmental Offsets Policy (Version 1.1)</i>	December 2014	State of Queensland
EPBC	means	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>	01 July 2015	Commonwealth of Australia
EPBC Act	means	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>	01 July 2015	Commonwealth of Australia
EPBC Koala Referral Guidelines	means	EPBC Act referral guidelines for the vulnerable koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	2014	Commonwealth of Australia
EPBC PMST Database	means	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i> Protected Matters Search Tool database interactive mapping	2015	Commonwealth of Australia
EPBC Significant Impact Guidelines	means	Matters of National Environmental Significance: Significant Impact Guidelines 1.1 <i>Environment Protection and Biodiversity Conservation Act 1999</i>	2013	Commonwealth of Australia
ESCP	means	Erosion and Sediment Control Plan		
Essential Habitat	means	as defined in the <i>Vegetation Management Act 1999</i> , section 20AC.		
Essential Management	means	as defined in the <i>Sustainable Planning Regulation 2000</i> , schedule 26.		



EVNT Species	means	Endangered, Vulnerable, Near Threatened and presumed Extinct species listed by name in schedules 1-5 of the <i>Nature Conservation Wildlife Regulation 2006</i> and least concern wildlife, not listed by name but identified as indigenous to Australia listed in Schedule 6.		
FMP	means	Fauna Management Plan		
GFPDA	means	Greater Flagstone Priority Development Area (formerly Greater Flagstone UDA)		
Guideline 14	means	PDA guideline no. 14 - Environmental values and sustainable resource use	May 2015	State of Queensland
Guideline 17	means	PDA guideline no. 17 - Remnant vegetation and koala habitat obligations in Greater Flagstone and Yarrabilba PDAs	Aug 2014	State of Queensland (Department of State Development, Infrastructure and Planning)
ICOP	means	Infrastructure Charging Offset Plan - Greater Flagstone Priority Development Area	Jul 2013	State of Queensland
Koala Habitat Areas	means	as defined in Guideline 17, an area mapped on State Planning Policy 2/10: Koala Conservation in South East Queensland, SEQ Koala Protection Area Koala Habitat Values maps as: - bushland habitat - having high and medium value suitable for rehabilitation habitat types.		
Koala Habitat Values Mapping	means	the plan of Koala Habitat Areas enclosed at Plan 4 (Appendix 1) , or as amended in accordance with Section 7 of the NESS.		
Koala SPRP	means	South East Queensland Koala Conservation State Planning Regulatory Provisions	May 2010	State of Queensland
Koala SPRP Guideline	means	Guideline- South East Queensland Koala Conservation - State Planning Regulatory Provisions	Jul 2014	State of Queensland (Department of



				Environment and Heritage Protection)
Koala SPRP Mapping	means	South East Queensland Koala Conservation State Planning Regulatory Provisions - Koala planning area version 1-2 spatial layer (QSpatial)	2 Jun 2010	State of Queensland
LCC	means	Logan City Council		
LPA	means	<i>Land Protection (Pest and Stock Route Management) Act 2002</i>	01 Oct2014	State of Queensland
Main Roads Fauna Sensitive Design Manual Vol.2	means	Fauna Sensitive Road Design Manual - Volume 2: Preferred Practices (Chapter 6 - Measures to achieve fauna sensitive roads, and Chapter 7 - Target Species Design Considerations)	Jun 2010	State of Queensland (Department of Transport and Main Roads)
MNES	means	Matters of National Environmental Significance		
MSES	means	Matters of State Environmental Significance		
MLES	means	Matters of Local Environmental Significance		
Nature Conservation (Koala) Conservation Plan 2006 and Management Program 2006-2016 (koala plan)	means	<i>Nature Conservation (Koala) Conservation Plan 2006</i>	27 Sep 2013	State of Queensland (Department of Environment and Heritage Protection)
NCA	means	<i>Nature Conservation Act 1992</i>	02 Jul 2015	State of Queensland (Department of Natural Resources and Mines)



NCA Protected Plants Exemption Process	means	where clearing is to be undertaken within a High Risk Area, as mapped by EHP Protected Plants Flora Survey Trigger Map, a flora survey will be undertaken in accordance with the Protected Plants Flora Survey Trigger Guidelines - Nature Conservation Act 1992 and where applicable, an Exempt Clearing Notification Form will be issued to EHP		State of Queensland (Department of Natural Resources and Mines)
NCA Protected Plants Flora Survey Guidelines	means	Flora Survey Guidelines - Protected Plants - Nature Conservation Act 1992	2014	State of Queensland (Department of Natural Resources and Mines)
NCWR	means	<i>Nature Conservation (Wildlife) Regulation 1994 (Reprint No. 2A)</i>	22 Dec 1999	State of Queensland (Department of Natural Resources and Mines)
NESS	means	Natural Environment Site Strategy		
NJKHT	means	Non-Juvenile Koala Habitat Trees		
NRM	means	Department of Natural Resources and Mines (Qld)		
NRM Covenant Control measures and Guidelines	means	as defined within the NRM Land Title Practice Manual (Qld), specifically Part 31 - Covenants, and NRM policy 'Covenants providing for non separate transfers PUX/952/066 version 4.05'	Apr 2009	State of Queensland (Department of Natural Resources and Mines)
NRM Regulated Vegetation Management Mapping	means	<i>Vegetation Management Act 1999</i> Regulated Vegetation Management Map - version 1.27 spatial layer (QSpatial)	7 Mar 2016	
NRM Self Assessable Guidelines for land management and exemption checklist	means	NRM self assessable clearing codes, specifically for Managing Encroachment, Managing Fodder Harvesting, Necessary Environmental Clearing, Property Infrastructure and Weed Control	02 Dec 2013	State of Queensland



OSS	means	Overarching Site Strategy		
PDA	means	Priority Development Area (formerly UDA)		
PDA Development Scheme	means	the <i>Greater Flagstone Urban Development Area Development Scheme</i>	Oct 2011	State of Queensland
PMAV	means	Property Map of Assessable Vegetation		
Future Investigation Area	means	land designated as Future Investigation Area on an endorsed / approved Context Plan for the Application Area		
Pre-clear Mapping	means	Draft pre-clearing regional ecosystems mapping data spatial layer (QSpatial)	8 May 2015	State of Queensland
Prescribed Matter	means	as defined by the <i>Environmental Offsets Act 2014</i>		
Property Map of Assessable Vegetation (PMAV)	means	as defined by the <i>Vegetation Management Act 1999</i>		
RE	means	Regional Ecosystems		
Regional Ecosystems	means	as defined by the <i>Vegetation Management Act 1999</i> .		
SARA	means	State Assessment Referral Agency (Qld)		
SARA Mapping	means	QSpatial layers applicable under SARA DA mapping tool		
SAT	means	Spot Assessment Technique Survey		
SDAP	means	State Development Assessment Provisions		
SDAP Module 8	means	Module 8 of the State Development Assessment Provisions (version 1.7)	23 Nov 2015	State of Queensland



SEQ Ecological Restoration Framework Code	means	South East Queensland Ecological Restoration Framework: Code of Practice	2012	Chenoweth EPLA and Bushland Restoration Services. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane.
SEQ Ecological Restoration Framework Guide	means	South East Queensland Ecological Restoration Framework: Guideline	2012	Chenoweth EPLA and Bushland Restoration Services. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane.
SEQ Ecological Restoration Framework Manual	means	South East Queensland Ecological Restoration Framework: Manual	2012	Chenoweth EPLA and Bushland Restoration Services. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane.
SEQRP	means	South East Queensland Regional Plan 2009-2031		
WWTP	means	wastewater treatment plant		



Significant Biodiversity Values	means	Significant Biodiversity Values are as mapped and annotated on Plan 8 (Appendix 1) , or as otherwise defined as: - Confirmed Areas of Remnant Vegetation Containing Endangered Regional Ecosystems - Confirmed Waterway Areas		
Significant Residual Impact	means	as defined by the Environmental Offsets Act 2014, as meaning: "an adverse impact, whether direct or indirect, of a prescribed activity on all or part of a prescribed environmental matter that – 1. Remains, or will or is likely to remain, (whether temporarily or permanently) despite onsite mitigation measures of the prescribed activity; and 2. Is, or will or is likely to be, significant.		
SPA	means	<i>Sustainable Planning Act 2009</i>	20 Nov 2015	State of Queensland
SPP	means	State Planning Policy		
SPP Biodiversity Values Mapping	means	<i>State Planning Policy 2014</i> Matters of State Environmental Significance spatial layer series, specifically for MSES Biodiversity	17 Dec 2013	State of Queensland
SPP 07/14	means	<i>State Planning Policy July 2014</i>	July 2014	State of Queensland (Department of State Development, Infrastructure and Planning)
SPRP	means	State Regulatory Planning Provisions		
SRI	means	Significant Residual Impact		
TEC	means	Threatened Ecological Community		



TMR	means	Department of Transport and Main Roads (Qld)		
UDA	means	Urban Development Area (now known as PDA)		
ULDA	means	Urban Land Development Authority (now known as EDQ)		
VMA	means	<i>Vegetation Management Act 1999</i>	11 Sep 2015	Queensland Government
VMP	means	Vegetation Management Plan		
Watercourse	means	is a watercourse as defined under the <i>Water Act 2000</i> , as meaning: “a river, creek or other stream, including a stream in the form of an anabrach or tributary, in which water flows permanently or intermittently, regardless of the frequency of flow events – a. In a natural channel, whether artificially modified or not, or b. In an artificial channel that has changed the course of the stream”.		
Waterway	means	as defined by DAF Mapping for WWBW and ground-truthed by field survey		
Waterway Barrier Works (WWBW)	means	as defined in the <i>Fisheries Act 1994</i>		
WWBW	means	Waterway Barrier Works		



Legislation and Guidelines referenced within this strategy

The following legislation (i.e. Acts, Guidelines and Policies) are referenced within this strategy and remain in effect for the purpose of this NESS:

Act / Policy /Guideline	Date of Publication	Author/Organisation
<i>Australian Standard AS4970-2009 Protection of trees on development sites (incorporating Amendment No. 1)</i>	Mar 2010	Standards Australia
<i>Code for Self-assessable development, Minor Waterway Barrier Works, Part 1: Low Impact Dams and Weirs (WWBW01)</i>	Apr 2013	State of Queensland (Department of Agriculture and Fisheries)
<i>Code for Self-assessable development, Minor Waterway Barrier Works, Part 2: Replacement of Existing Floodgates (WWBW01)</i>	Oct 2011	State of Queensland (Department of Agriculture and Fisheries)
<i>Code for Self-assessable development, Minor Waterway Barrier Works, Part 3: Culvert Crossings (WWBW01)</i>	Apr 2013	State of Queensland (Department of Agriculture and Fisheries)
<i>Code for Self-assessable development, Minor Waterway Barrier Works, Part 4: Construction and Maintenance of Bed Level Crossings (WWBW01)</i>	Apr 2013	State of Queensland (Department of Agriculture and Fisheries)
<i>Code for Self-assessable development, Temporary Waterway Barrier Works (WWBW02)</i>	Apr 2013	State of Queensland (Department of Agriculture and Fisheries)
<i>Code for Self-assessable development, Regularly Constructed Waterway Barrier Works (WWBW03)</i>	Oct 2011	State of Queensland (Department of Agriculture and Fisheries)
<i>Crime Prevention through Environmental Design- Guidelines for Queensland - Part B: Implementation Guide</i>	Oct 2007	State of Queensland
<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>	Jul 2015	Commonwealth of Australia
<i>Environmental Offsets Act 2014</i>	Jul 2015	State of Queensland
<i>EPBC Act Administrative Guidelines on Significance – Supplement for the Grey-headed Flying-fox</i>	2003	Commonwealth of Australia



<i>EPBC Act referral guidelines for the vulnerable koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)</i>	2014	Commonwealth of Australia
<i>Fauna Sensitive Road Design Manual - Volume 2: Preferred Practices</i>	Jun 2010	State of Queensland (Department of Transport and Main Roads)
<i>Flora Survey Guidelines - Protected Plants - Nature Conservation Act 1992</i>	2014	State of Queensland (Department of Environment and Heritage Protection)
<i>Greater Flagstone Urban Development Area Development Scheme</i>	Oct 2011	State of Queensland
<i>Guideline- South East Queensland Koala Conservation - State Planning Regulatory Provisions</i>	Jul 2014	State of Queensland (Department of Environment and Heritage Protection)
<i>Infrastructure Charging Offset Plan - Greater Flagstone Priority Development Area</i>	Jul 2013	State of Queensland
<i>Koala-sensitive Design Guideline- A guide to koala-sensitive design measures for planning and development activities</i>	Nov 2012	State of Queensland (Department of Environment and Heritage Protection)
<i>Land Protection (Pest and Stock Route Management) Act 2002</i>	01 Oct 2014	State of Queensland
<i>List of Vegetation Clearing Exemptions</i>	2013	State of Queensland (Department of Natural Resources and Mines)
<i>Matters of National Environmental Significance: Significant Impact Guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999</i>	2013	Commonwealth of Australia
<i>Nature Conservation (Koala) Conservation Plan 2006</i>	27 Sep 2013	State of Queensland (Department of Environment and Heritage Protection)
<i>Nature Conservation (Wildlife) Regulation 1994 (Reprint No. 2A)</i>	22 Dec 1999	State of Queensland
<i>Nature Conservation Act 1992</i>	02 Jul 2015	Queensland Government
<i>PDA guideline no. 14 - Environmental values and sustainable resource use</i>	May 2015	State of Queensland
<i>PDA guideline no. 17 - Remnant vegetation and koala habitat obligations in Greater Flagstone and Yarrabilba PDAs</i>	Aug 2014	State of Queensland, Department of State Development, Infrastructure and Planning
<i>Queensland Code of Practice for the welfare of wild animals affected by land-clearing and other habitat impacts and wildlife spotter / catchers (Draft)</i>	2009	Jon Hanger & Ben Nottidge - Australian Wildlife Hospital



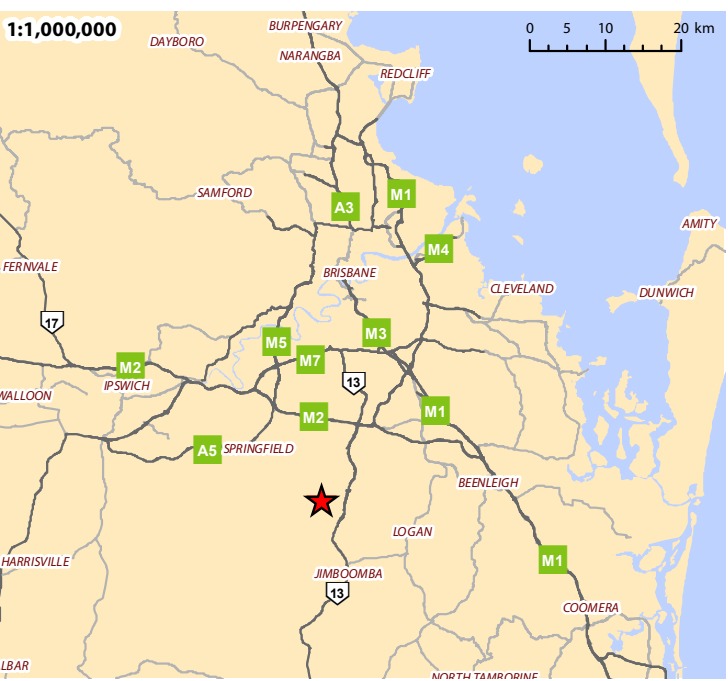
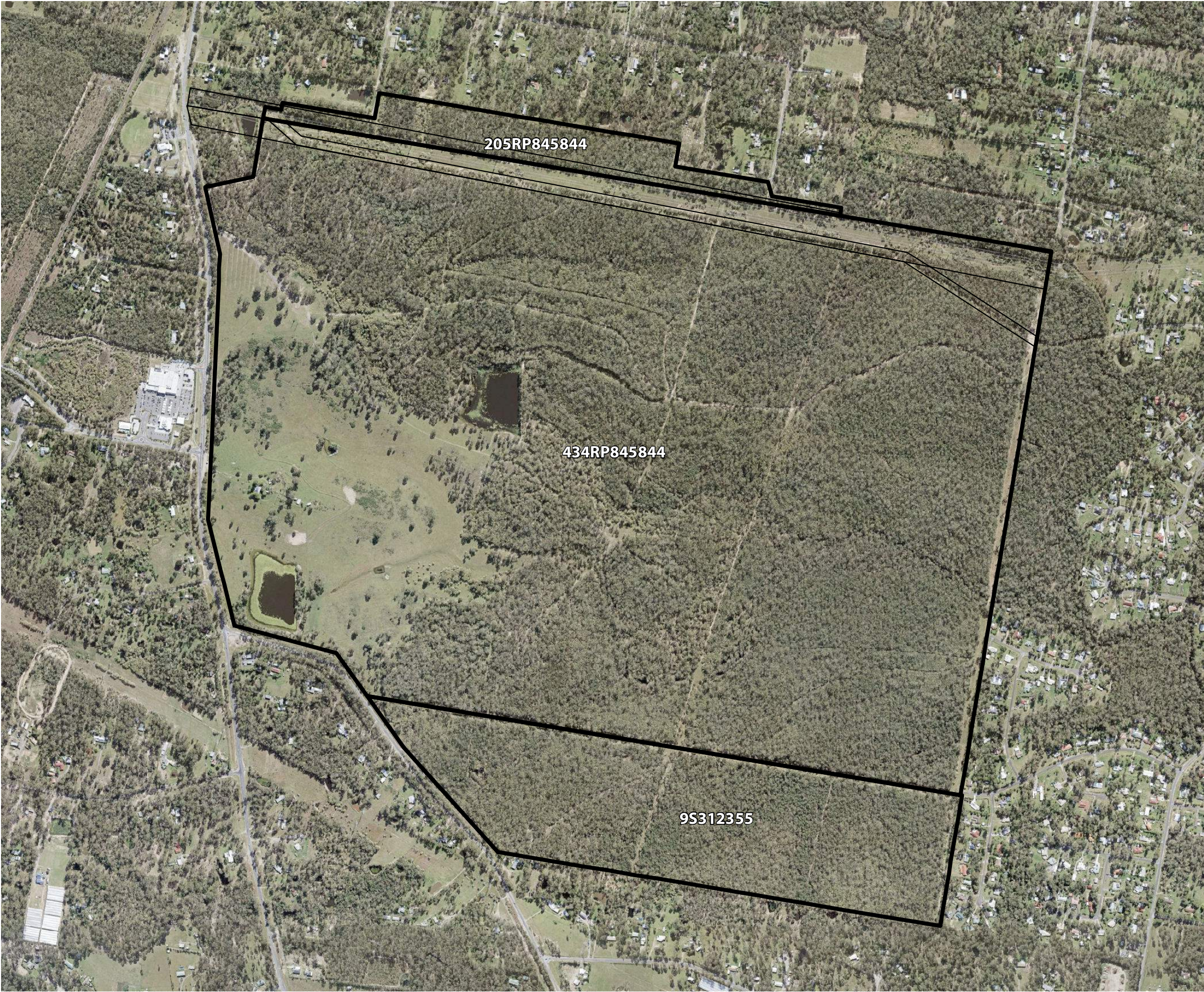
<i>Queensland Environmental Offsets Policy (Version 1.1)</i>	Dec 2014	State of Queensland
<i>Significant Residual Impact Guideline - For matters of state environmental significance and prescribed activities assessable under the Sustainable Planning Act 2009 - Queensland Environmental Offsets Policy</i>	Dec 2014	State of Queensland, Department of State Development, Infrastructure and Planning
<i>South East Queensland Ecological Restoration Framework: Code of Practice</i>	2012	Chenoweth EPLA and Bushland Restoration Services. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane.
<i>South East Queensland Ecological Restoration Framework: Guideline</i>	2012	Chenoweth EPLA and Bushland Restoration Services. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane.
<i>South East Queensland Ecological Restoration Framework: Manual</i>	2012	Chenoweth EPLA and Bushland Restoration Services. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane.
<i>South East Queensland Koala Conservation State Planning Regulatory Provisions</i>	May 2010	Queensland Government
<i>State Planning Policy July 2014</i>	Jul 2014	State of Queensland (Department of State Development, Infrastructure and Planning)
<i>Sustainable Planning Act 2009</i>	Nov 2015	State of Queensland
<i>Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (v 2.0)</i>	Nov 2014	The State of Queensland (Department of Science, Information Technology, Innovation and the Arts)
<i>Vegetation Management Act 1999</i>	Sep 2015	State of Queensland
<i>Water Act 2000</i>	Oct 2015	State of Queensland



Appendix I

Plans

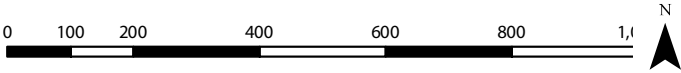
- Plan 1:** Site Aerial
- Plan 2:** Certified Property Map of Assessable Vegetation
- Plan 3:** Property Map of Assessable Vegetation Awaiting Certification
- Plan 4:** SEQ Koala Habitat Values Mapping
- Plan 5:** Fisheries – Waterways for Waterway Barrier Works
- Plan 6:** Indicative Development Interface to Retained Vegetation – Section AA
- Plan 7:** Indicative Development Interface to Retained Vegetation – Section BB
- Plan 8:** Natural Environment Site Strategy – Site Constraints Plan



Legend

Project site DCDB

Easement



APPROVED COMPANY
ISO 9001
Quality Management Systems
QMS Certification Services

APPROVED COMPANY
ISO 14001
Environmental Management Systems
QMS Certification Services

Greenbank

Natural Environment Site Strategy

Site Aerial

Date | 8/03/2016
Scale | 1:12,000 @ A3
Coordinate System | GDA 1994 MGA Zone 56
Projection | Transverse Mercator
Client | MIRVAC
Project | Greenbank
Address/RPD | Lot 434 on RP845844
Sources | QLD GIS Layers (QLD Gov. Info Services 2015),
Structure Plan (URBIS, 2015)

Plan 1

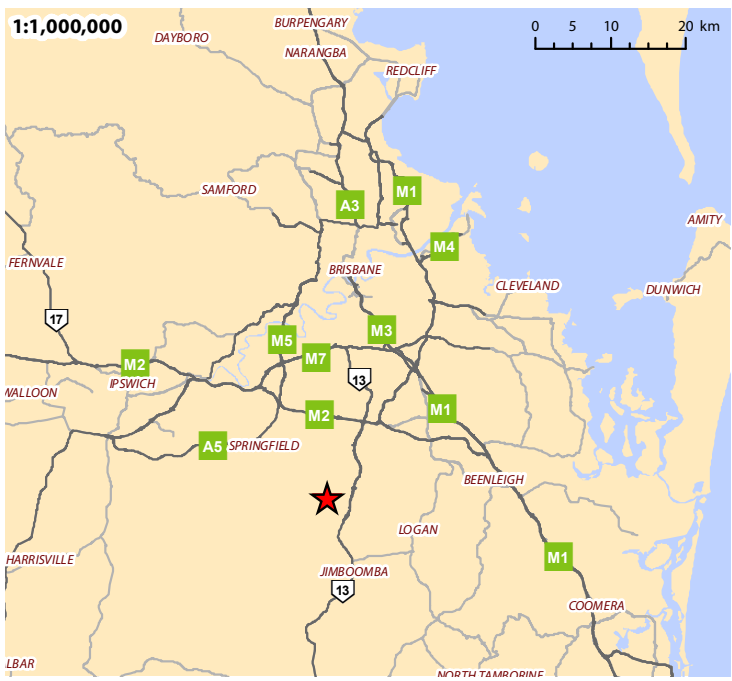
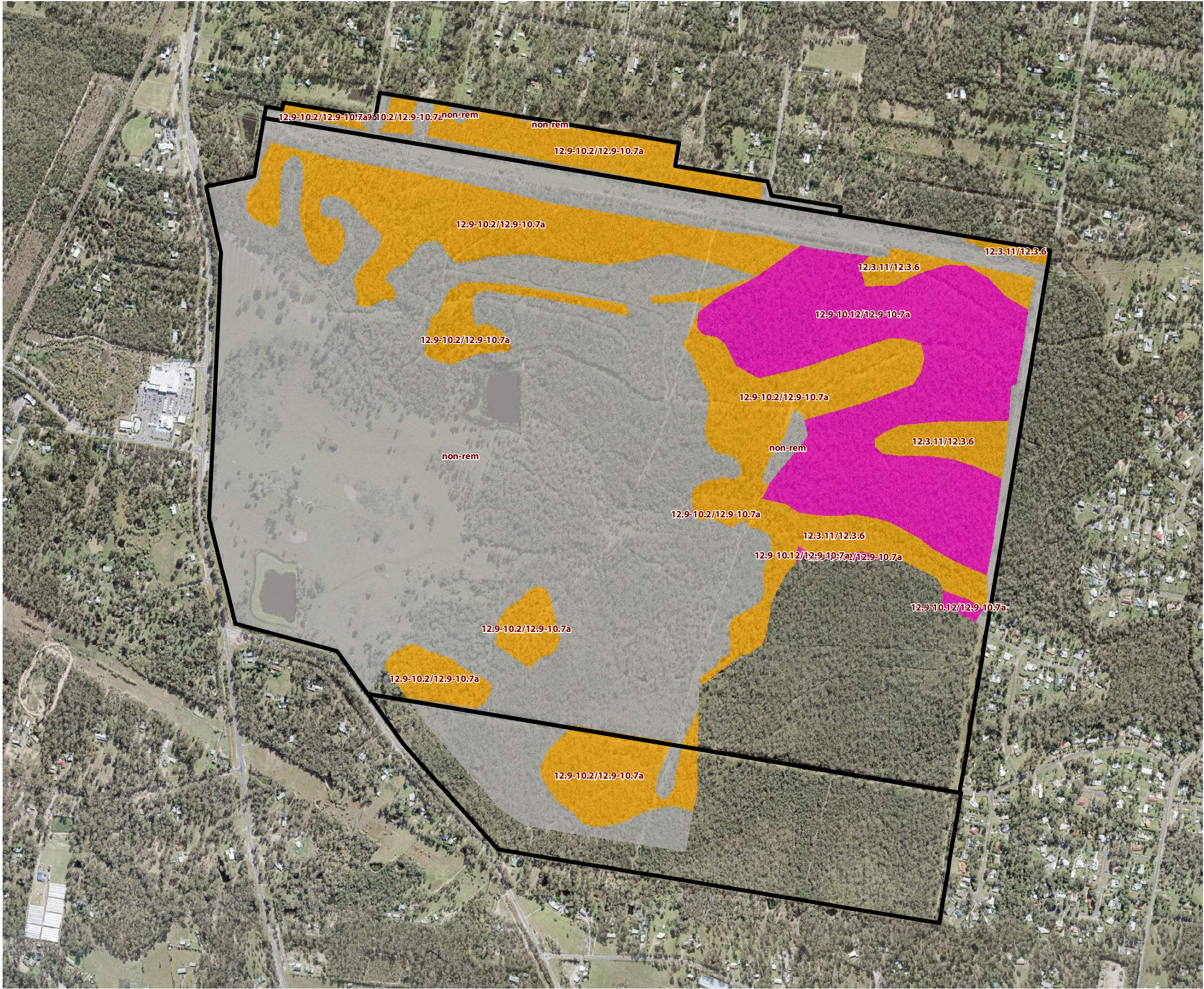
SHG File
7598 E 01 Site Aerial A

ISSUES:				
Issue	Date	Description	Drawn	Checked
A	8/03/2016	Prelim Draft	TC	MS

THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT. SAUNDERS HAVILL GROUP CANNOT ACCEPT RESPONSIBILITY FOR ANY USE OF OR RELIANCE UPON THE CONTENTS OF THESE DRAWINGS BY ANY THIRD PARTY.

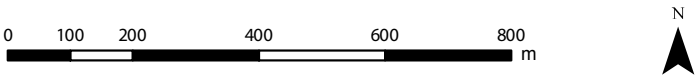
CONFIRM ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION AND DO NOT SCALE FROM THE DRAWINGS. ALL DIMENSIONS ARE IN MILLIMETRES. ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH SAUNDERS HAVILL GROUP PRIOR TO THE COMMENCEMENT OF WORK.

PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON SITE, THE RELEVANT AUTHORITY SHOULD BE CONTACTED FOR FURTHER UNDER-GROUND SERVICES AND DETAILED LOCATIONS OF ALL SERVICES.



Legend

- Project site DCDB
- Certified PMAV 2015/004538**
- Category B - Containing Endangered REs
- Category B - Containing Of Concern REs
- Category X - Non-remnant



THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT SAUNDERS HAVILL GROUP. CANNOT ACCEPT RESPONSIBILITY FOR ANY USE OF OR RELIANCE UPON THE CONTENTS OF THESE DRAWINGS BY ANY THIRD PARTY.

CONFIRM ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION AND DO NOT SCALE FROM THE DRAWINGS. ALL DIMENSIONS ARE IN MILLIMETRES. ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH SAUNDERS HAVILL GROUP PRIOR TO THE COMMENCEMENT OF WORK.

PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON SITE, THE RELEVANT AUTHORITY SHOULD BE CONTACTED FOR FURTHER UNDER-GROUND SERVICES AND DETAILED LOCATIONS OF ALL SERVICES.

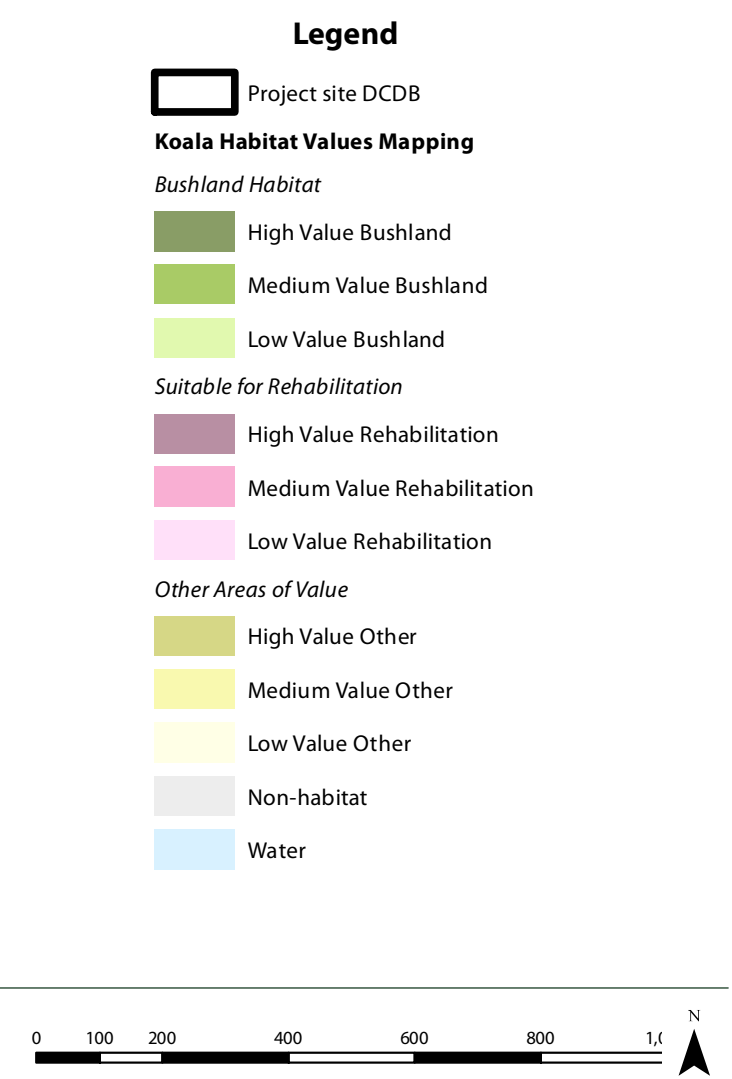
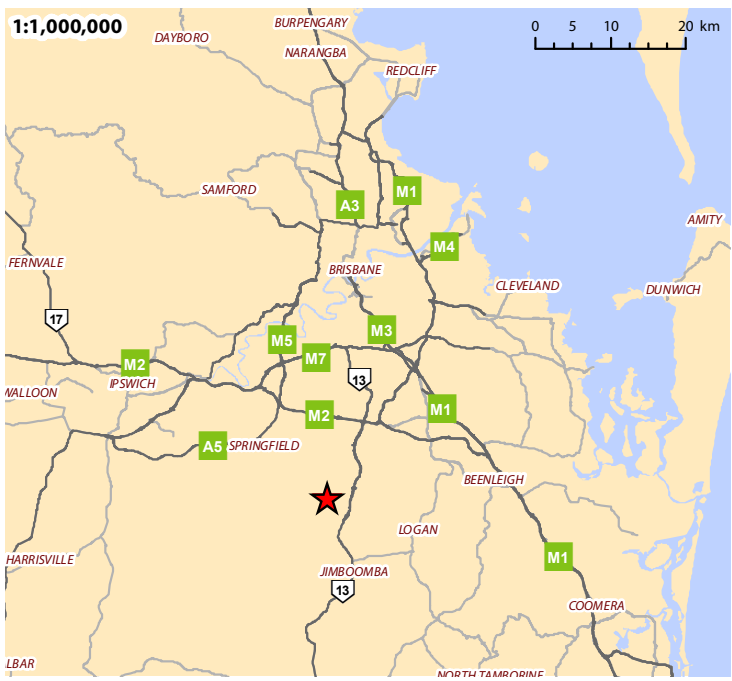
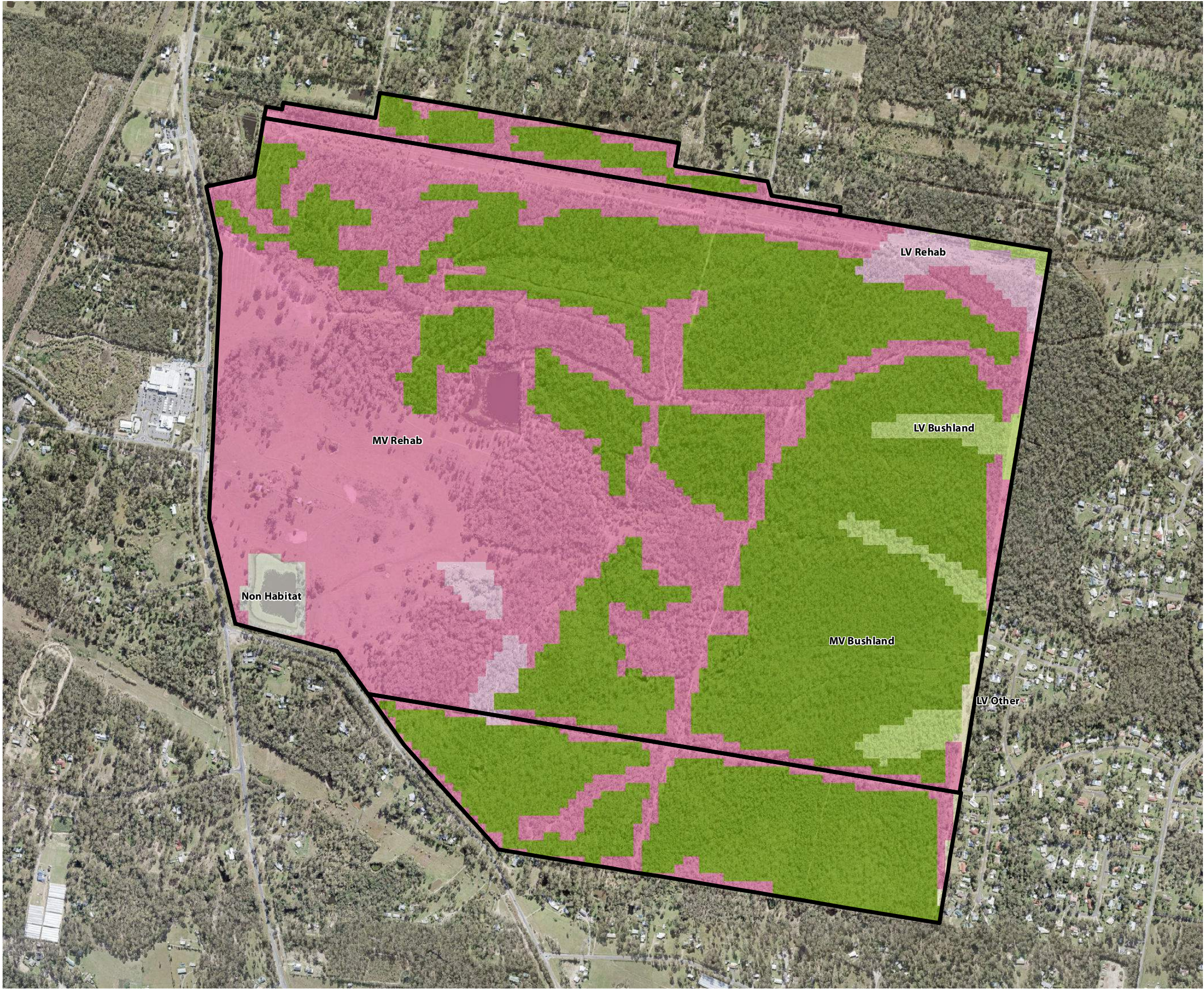
ISSUES:				
Issue	Date	Description	Drawn	Checked
A	8/03/2016	Prelim Draft	TC	MS

Greenbank
Natural Environment Site Strategy
Certified Property Map of Assessable Vegetation

Date | 8/03/2016
Scale | 1:12,000 @ A3
Coordinate System | GDA 1994 MGA Zone 56
Projection | Transverse Mercator
Client | MIRVAC
Project | Greenbank
Address/RPD | Lot 434 on RP845844
Sources | QLD GIS Layers (QLD Gov. Info Services 2015), Structure Plan (URBIS, 2015)

Plan 2

SHG File
7598 E 02 Certified PMAV A



saunders
havill
group

mirvac

ISSUES:

Issue	Date	Description	Drawn	Checked
A	18/03/2016	Prelim Draft	TC	MS

APPROVED COMPANY

ISO 9001
Quality
Management Systems

QMS Certification Services

APPROVED COMPANY

ISO 14001
Environmental
Management Systems

QMS Certification Services

Greenbank

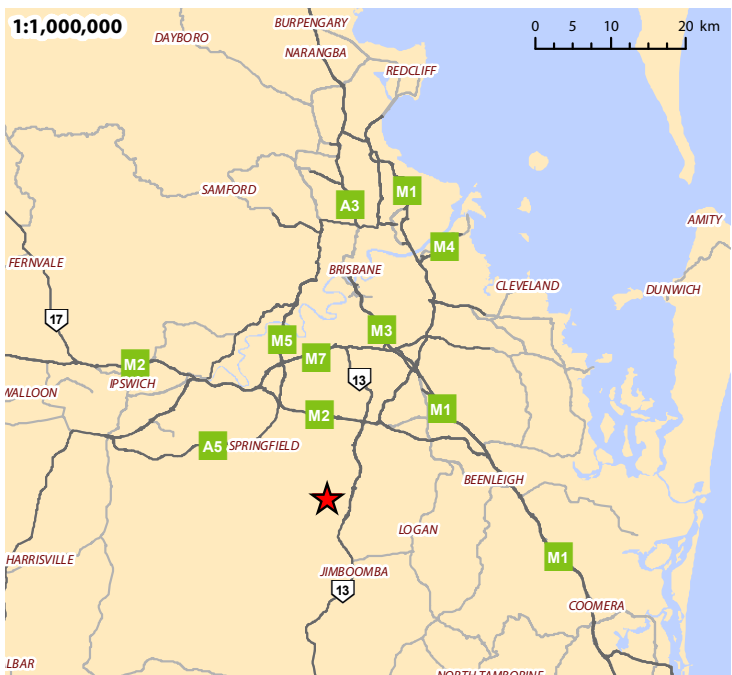
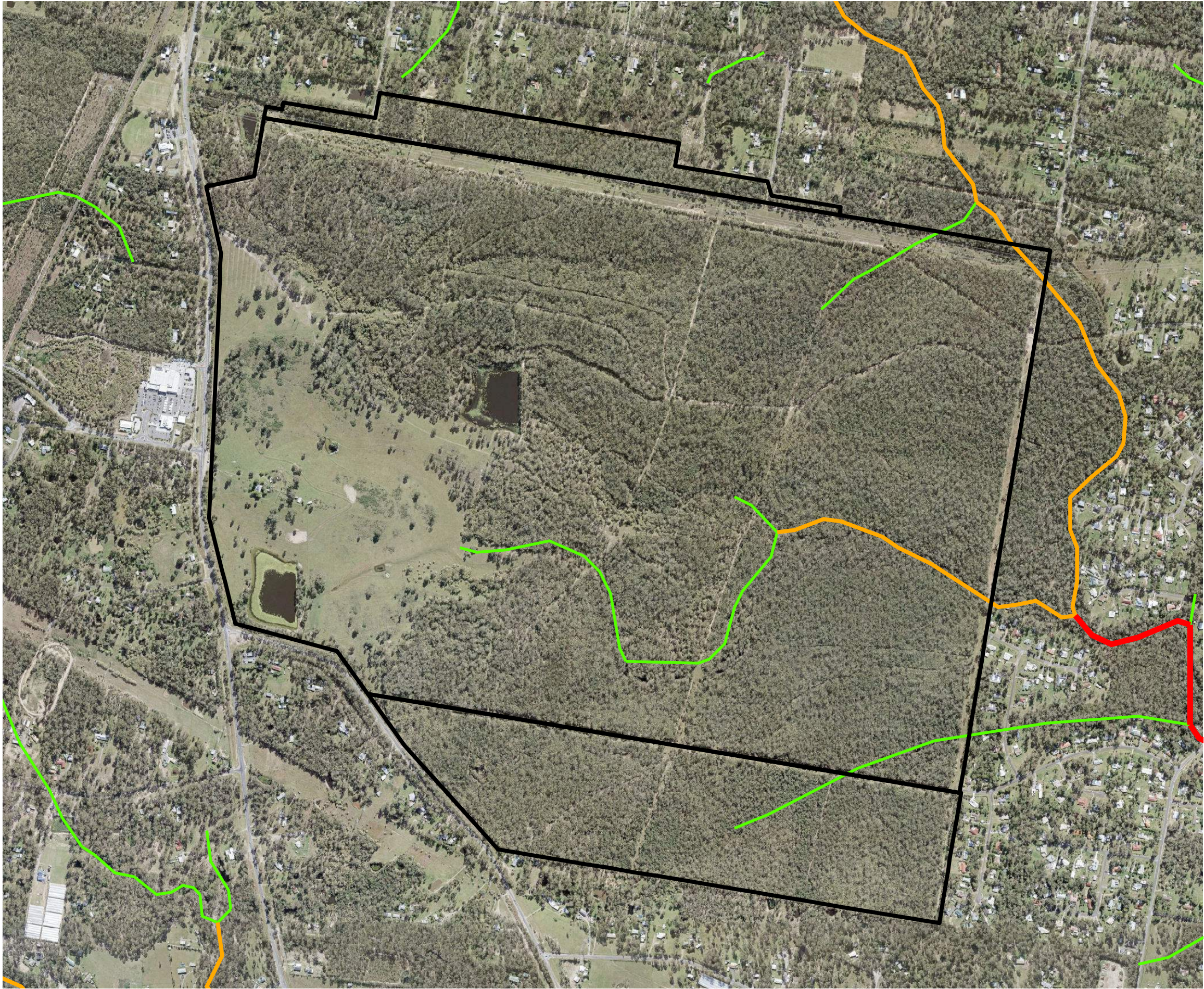
Natural Environment Site Strategy

SEQ Koala Habitat Values Mapping

Date | 18/03/2016
Scale | 1:12,000 @ A3
Coordinate System | GDA 1994 MGA Zone 56
Projection | Transverse Mercator
Client | MIRVAC
Project | Greenbank
Address/RPD | Lot 434 on RP845844
Sources | QLD GIS Layers (QLD Gov. Info Services 2015),
Structure Plan (URBIS, 2015)

Plan 4

SHG File
7598 E 04 Koala Habitat Values A



Legend

 Project site DCDB

Waterways

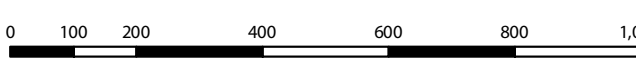
Risk of Impact

 1 - Low

 2 - Moderate

 3 - High

 4 - Major



ISSUES:

Issue	Date	Description	Drawn	Checked
A	18/03/2016	Prelim Draft	TC	MS

THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT SAUNDERS HAVILL GROUP. CANNOT ACCEPT RESPONSIBILITY FOR ANY USE OF OR RELIANCE UPON THE CONTENTS OF THESE DRAWINGS BY ANY THIRD PARTY.

CONFIRM ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION AND DO NOT SCALE FROM THE DRAWINGS. ALL DIMENSIONS ARE IN MILLIMETRES. ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH SAUNDERS HAVILL GROUP PRIOR TO THE COMMENCEMENT OF WORK.

PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON SITE, THE RELEVANT AUTHORITY SHOULD BE CONTACTED FOR FURTHER UNDER-GROUND SERVICES AND DETAIL LOCATIONS OF ALL SERVICES.

Greenbank

Natural Environment Site Strategy

Fisheries - Waterways for Waterway Barrier Works

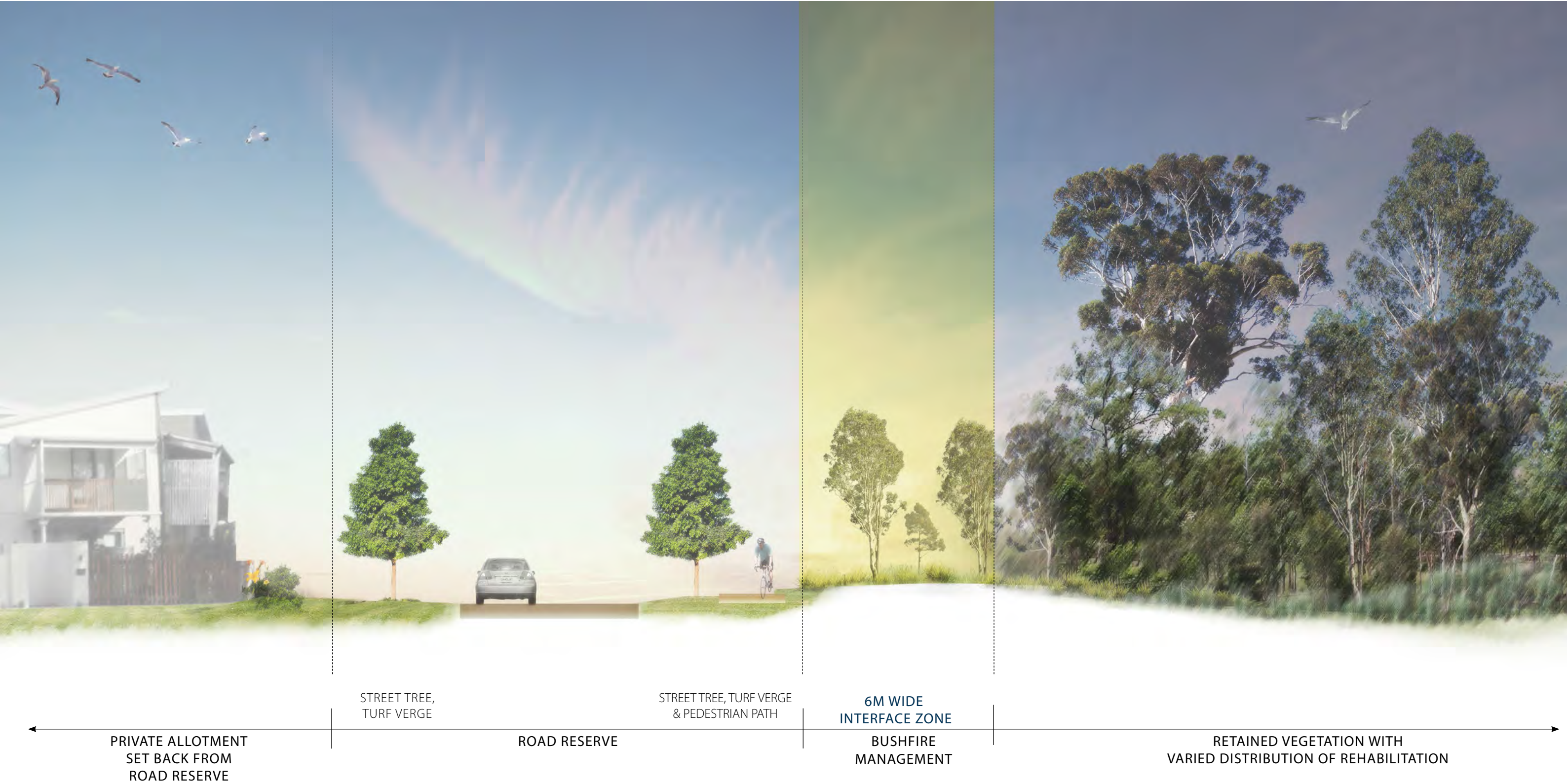
Date | 18/03/2016
Scale | 1:12,000 @ A3
Coordinate System | GDA 1994 MGA Zone 56
Projection | Transverse Mercator
Client | MIRVAC
Project | Greenbank
Address/RPD | Lot 434 on RP845844
Sources | QLD GIS Layers (QLD Gov. Info Services 2015), Structure Plan (URBIS, 2015)

Plan 5

SHG File
7598 E 05 Fisheries A

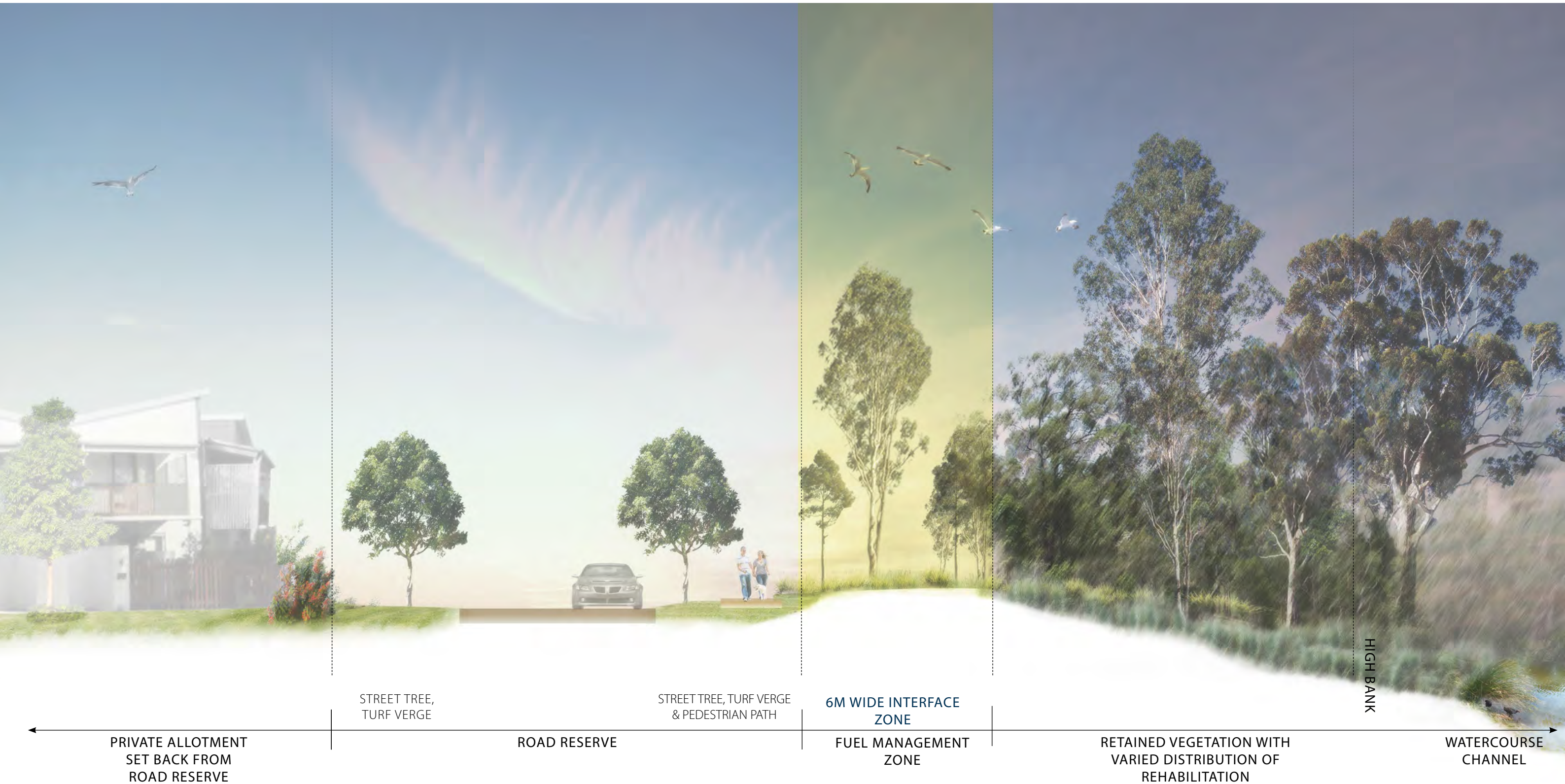
GREENBANK ROAD - TECHNICAL ECOLOGICAL ASSESSMENT REPORT

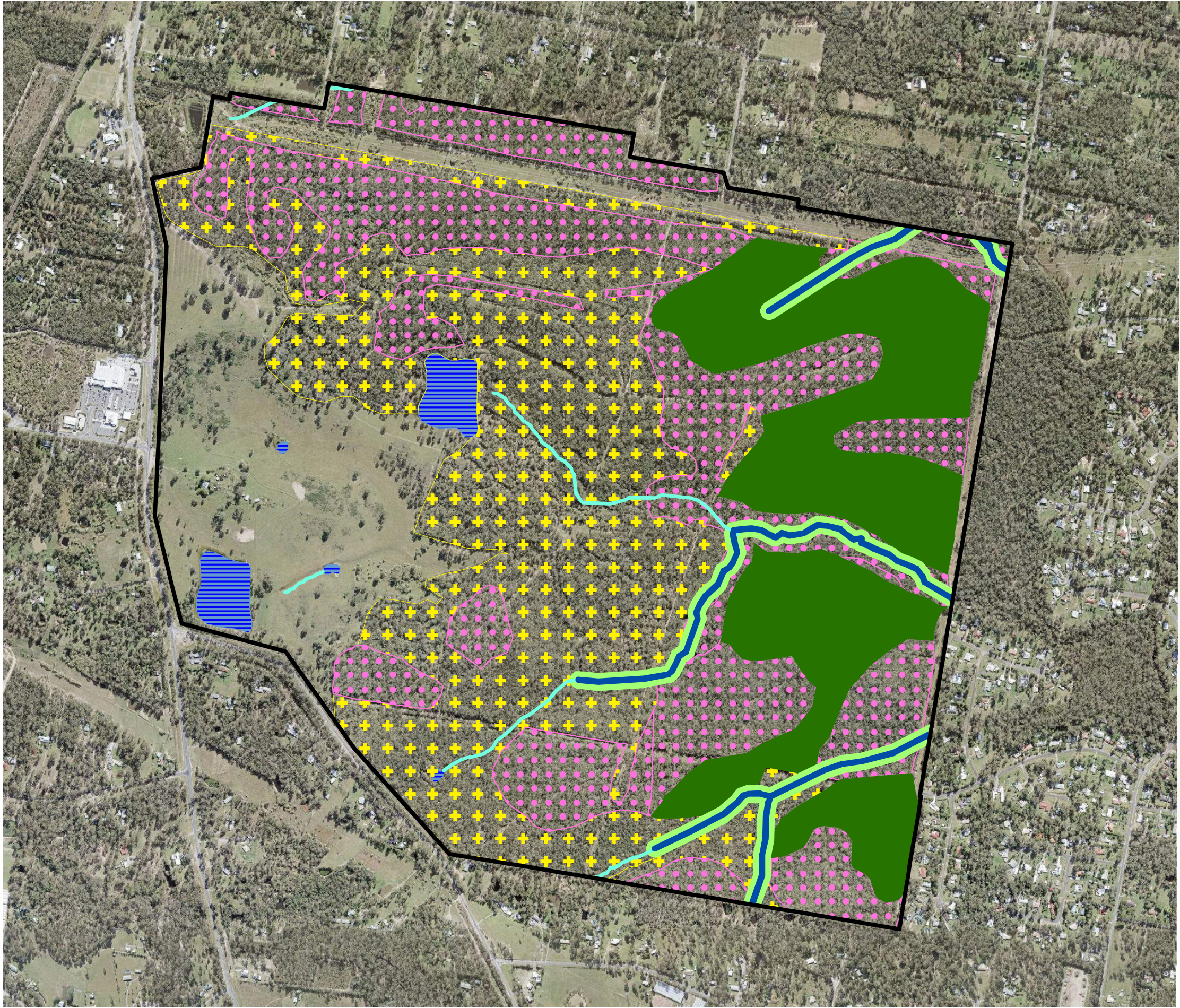
INDICATIVE DEVELOPMENT INTERFACE TO RETAINED VEGETATION - SECTION AA



GREENBANK ROAD - TECHNICAL ECOLOGICAL ASSESSMENT REPORT

INDICATIVE DEVELOPMENT INTERFACE TO RETAINED VEGETATION - SECTION BB





Legend

 Project site boundary

Significant Biodiversity Values

Confirmed Areas of Remnant Vegetation
Containing Endangered Regional Ecosystems

 Areas proposed and confirmed through Property Map of Assessable Vegetation application as retaining remnant vegetation of an Endangered Regional Ecosystem type

Confirmed Waterway Areas

 Areas confirmed through field survey. As retaining features consistent with a watercourse within the extent of the Project Site

Other Biodiversity Values

Low Order Remnant Vegetation

 Of Concern and Least Concern Regional Ecosystem type areas

Waterway Buffer Areas

 Areas of preferred buffer extent to Project Site watercourses

Other Drainage Features & Watercourses

 Areas within the site conveying current hydrology flow paths – *varying quality*.

Project Site Farm Dams

 Locations of artificially created farm dams

Areas of Juvenile Native Vegetation

 Areas of Project Site retaining varying degrees of native regeneration vegetation

