

Attachment 6 Bushfire Management Plan

Prepared by Eldon Botcher

LOGAN CITY COUNCIL

APPROVED DOCUMENT

This is an approved document for Development Application

COM/7/2022/1



Bushfire Management Plan

**BUSHFIRE MITIGATION REPORT
FM 5464-1
for
JLF CORPORATION PTY LTD
at
680-688 & 690-702 CHAMBERS FLAT ROAD
AND
691-697, 699-705, 707-713 & 715-721 LOGAN RESERVE ROAD
LOGAN RESERVE**

**PREPARED BY
ELDON BOTTCHE ARCHITECT PTY LTD
145 VARSITY PARADE
VARSITY LAKES
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7/07/2022**



TABLE OF CONTENTS**DISCLAIMER****1. INTRODUCTION**

- 1.1. Address
- 1.2. Local Authority
- 1.3. R.P.D.
- 1.4. Site Area
- 1.5. Responsible Fire Authority
- 1.6. Potential Bushfire Hazard Rating.
- 1.7. Land Tenure
- 1.8. Adjoining Owners
- 1.9. Current Land Use
- 1.10. Fire Danger Index
- 1.11. Topography
- 1.12. Predominant Wind Direction
- 1.13. Slope
- 1.14. Aspect
- 1.15. Fuel Type
- 1.16. Threat Vegetation Location
- 1.17. Fire History
- 1.18. Location of access tracks
- 1.19. Location of fire breaks
- 1.20. Location of existing firefighting infrastructure
- 1.21. Historical and cultural sites

2. SITE AND HAZARD ASSESSMENT

- 2.1. Discussion with Responsible Fire Authority
- 2.2. Vegetation Types
- 2.3. Potential Bushfire Hazard Rating.
- 2.4. Building Construction
- 2.5. Ecological Requirements

3. RISK MANAGEMENT PLAN

- 3.1. Agencies / Persons Responsible
- 3.2. Bushfire Safety Objectives
- 3.3. Aims
- 3.4. Functional Requirements
- 3.5. Proposed Fire Fighting Infrastructure
- 3.6. Building Construction
- 3.7. Street Numbering
- 3.8. Less Flammable Landscaping
- 3.9. Insurance
- 3.10. Emergency Response Procedures
- 3.11. Community Awareness Strategies
- 3.12. Administering Staff

4. FIRE MANAGEMENT ACTION SUMMARY AND SCHEDULE**5. APPENDICES**

- 5.1. Form 15
- 5.2. Site Plans
- 5.3. Supporting Information

6. PROFILES

DISCLAIMER

Experienced fire fighters with extensive knowledge of building have prepared this Report. Their practical knowledge of fire fighting has been backed up by academic study.

However, fire is an element of nature. Small natural occurrences can disastrously affect the outcome of the best planning. Human actions similarly can have disastrous results.

Whilst every care has been taken in the formulation of this management report, there can be no guarantee that even the strictest adherence to its recommendations can guarantee safety of life and property.

The authors of this report accept no responsibility for any damage to life or property caused by fire or any other cause to persons using land or structures, which could in any way be construed to be the subject of this report.

The report has been commissioned as the land falls within an area deemed a fire risk by the local authority.

As such, it must be recognized that structures upon this land and those using the structures could be deemed at risk.

Logo by LogoInstant

Very Important Note:

This report is valid for the following periods;

- a) A maximum time of 5 years from date of preparation.
- b) The currency of the legislation referred to in Section 1 Report Brief
- c) Changes to any legislation generally that may impact on the report outcomes.
- d) Changes to vegetation, both on and off site, which may impact on the results of this report
- e) Any other changes that may impact on the report in any manner.

THE COPYRIGHT ACT AND MORAL RIGHTS ACT PROTECT THIS REPORT.

IRRESPECTIVE OF THIS REPORT APPEARING ON A COUNCIL PD OR OTHER ONLINE SITE, THERE IS NO PERMISSION IMPLIED OR GIVEN TO ANY PARTY TO DOWNLOAD OR TO USE THIS REPORT IN WHOLE OR IN PART IN ANY MANNER OTHER THAN THAT FOR WHICH IT WAS ORIGINALLY PREPARED.

ANY SUCH USE WILL BE PROSECUTED TO THE FULL EXTENT OF THE LAW.

THIS REPORT RELIES ON THE AS 3959 FOR THE CALCULATION OF CONSTRUCTION LEVELS.

ANY POSSIBLE ERRORS IN THE STANDARD ARE NOT THE RESPONSIBILITY OF THE AUTHOR.

THIS REPORT IS ONLY TO BE USED AND DISTRIBUTED AS A COMPLETE REPORT CONTAINING AS A MINIMUM SECTIONS 1,2,3,4 AND 5 (SECTIONS 5.1 & 5.2)

THIS REPORT IS NOT TO BE AMENDED IN ANY WAY BY ANY PERSONS OTHER THAN THE ORIGINAL AUTHOR.

THIS REPORT IS ONLY TO BE USED FOR PROJECTS IDENTIFIED IN THE REPORT AND REPRESENTED ON THE SITE PLAN ACCOMPANYING THE REPORT.

INTRODUCTION

This Fire Management Report has been written for the benefit of future occupants of this proposed site and developed in accordance with the requirements of;

- The Logan City Council Town Plan,
- SPP 07/2017.
- Queensland Planning Act 2016
- “Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest” Natural Hazards , Risk and Resilience-Bushfire” published by QFES and Queensland Government.
- Natural hazards, risk and resilience-Bushfire State Planning Policy-state interest guidance material published by Queensland Government
- Bushfire Resilient Building Guidance for Queensland Homes published by CSIRO and Queensland Government
- The National Construction Code
- Queensland Bushfire Plan published by Queensland Government prepared by QFES.
- Australian Standard AS3959,
- International Fire Safety Engineering Guidelines

The report has been prepared as supporting documentation for a Material Change of Use (Building) /Reconfiguration of Lot Application. This report has been amended from the original by the inclusion of Lot 27 on RP106853 and resultant layout changes, and various editorial changes.

- 1.1. **Address:**
680-688 & 690-702 Chambers Flat Road
and
691-697, 699-705,707-713 & 715-721 Logan Reserve Road
Logan Reserve
- 1.2. **Local Authority**
Logan City Council
- 1.3. **R.P.D.**
Lots 12,13,26,27,28 & 29 on RP106853
- 1.4. **Site area**
123,092m²
- 1.5. **Responsible Fire Authority**
Rural Fire Service Queensland via the rural fire brigade for rural fires and QFES for Structural fires.
- 1.6. **Potential Bushfire Hazard Rating.**
The draft risk rating maps prepared for the State Government show the ratings on these properties ranging from Low to Medium and being in a Bushfire Hazard buffer area.
- 1.7. **Land tenure**
Freehold
- 1.8. **Adjoining owners are:**
Freehold
- 1.9. **Current Land Use:**
Rural Residential
- 1.10. **Fire danger Index**
FDI 40 (nominated by AS 3959)
- 1.11. **Topography**
Undulating
- 1.12. **Predominant Wind Direction**
The predominate wind direction is from the South East. In times of severe fire weather the wind direction will be from the North West. The Topography will create microclimates, which will cause swirling, which will modify the apparent wind direction according to primary direction and velocity
- 1.13. **Slope**
0-5⁰
- 1.14. **Aspect**
South

1.15. Fuel Type

Predominate vegetation

REGIONAL ECOSYSTEM	VHC	VHC DESCRIPTION	SURFACE FUEL LOAD	TOTAL FUEL LOAD
12.9-10.4	9.2	Moist to dry eucalypt woodland on coastal lowlands and ranges	11.4	17.2

1.16. Threat Vegetation Location

Currently located on Lots 12,26 and 27 and will be removed as part of the development process. All other threat vegetation mass is located more than 100m from the subject sites.

1.17. Fire History

There is no evidence of a recent fire event

1.18. Location of Access Tracks

The sites are served by a sealed road system.

1.19. Location of Fire Breaks

There are no formal firebreaks. Managed and Low Threat vegetation mass for distances more than 100m in all directions forms effective fire breaks.

1.20. Location of existing firefighting Infrastructure

The site will be served by reticulated water

1.21. Historical and Cultural Sites

There is no evidence of Historical and Cultural sites on the property.

2. SITE AND HAZARD ASSESSMENT

2.1. Discussion with Responsible Fire Authority

The fire management report has not been discussed with the First Officer of the Rural Fire Brigade.

2.2. Vegetation Types

The vegetation type predominate to this site are as scheduled in section 1.15

2.3. Potential Bushfire Hazard Rating.

Site inspection and assessment against the State Planning Policy Mapping Methodology generally **DOES NOT** confirm the intent of either Local Government and State Mapping in that the area is in a Potential Bushfire Hazard Area, and the relevant aspects required for Town Planning and Building are to be addressed.

2.4. Building Construction

All buildings situated within the site are in a Designated Risk Area. There is a requirement that certain Buildings within this area be constructed in accordance with the Building Code of Australia, which refers to either the Australian Standard for Construction in Bushfire Prone Areas or NASH Standard-Steel Framed Construction in Bushfire Areas.

The levels determined effect the types and usage of materials in relation to the type of Bushfire Attack, which may occur as assessed under the Standard. The Level of Bushfire Attack is assessed taking the vegetation types, slope, and distance from vegetation into account. The most common elements affected are Windows and flyscreening, with some restrictions on cladding and timber types. A comprehensive breakdown is available in either the National Construction Code or the Australian Standard for Construction in Bushfire Prone Areas. Extracts of these documents are not provided due to copyright reasons. Full details can be obtained from your building designer or certifier.

Note that the Building Code of Australia only requires Classes 1,2 and 3 buildings and Class 10a building associated with those buildings to comply with the requirements of AS 3959.

Building Class requirements AS 3959

- 2.4.1. FDI 40
- 2.4.2. Vegetation Classification A
- 2.4.3. Land slope Downslope
>0 to 5 degrees

Distance of building from Predominate vegetation class (Vegetation Management Zone)	Primary Bushfire Attack Level
100-	BAL-LOW

Note:

The levels shown above are based on Method 1 of the AS 3959.

The Vegetation management zone is described as all areas managed to a Low Threat condition encompassed by the distance between the building and threat vegetation from which construction levels are taken.

The distances shown above are horizontal distances, not measured along the slope.

2.5. Ecological Requirements

There are no specific ecological requirements in relation to bushfire management.

Note;

The Category of Bushfire Attack referred to in the Australian Standard is different to the Hazard/Risk area referred to above.

Extensive modification of the existing vegetation types including that on adjoining sites could result in a change of Category of Bushfire Attack and therefore variation in the Level of construction required.

It is the responsibility of the owner of each individual site to ensure that plantings subsequent to their occupation of the site do not reduce the safety of their buildings in a manner, which could require a higher level of Construction than that originally utilised

3. RISK MANAGEMENT PLAN

3.1. Agencies / Persons Responsible

The responsible Fire Authority is the Rural Fire Service Queensland through the Rural Fire Brigade being responsible for Bush Fires and the Queensland Fire and Emergency Service being responsible for Structural Fires

It is the responsibility of the Developers and Owners of the properties to ensure that the relevant measures required by this Management Report are in place prior to inspection by the Council and the Building Certifier and to ensure that those measures are in place prior to the occupation of any buildings, which are the subject of this report. It is the responsibility of Council and Building Certifiers to ensure that relevant measures within their responsibility are in place prior to the issuance of any certification.

3.2. Bushfire Safety Objective

The objective of this report is to minimise potential risk to life and property by protecting the buildings from the effects of bushfire.

3.3. Aims

The aims to achieve this objective are to mitigate the effect of the bushfire attack mechanisms of: -

- 3.3.1. Radiant Heat
- 3.3.2. Direct Flame Contact
- 3.3.3. Wind
- 3.3.4. Ember Attack
- 3.3.5. Smoke

3.4. Functional Requirements

The functional requirements to achieve this objective are: -

- 3.4.1. The provision of safe conditions for fire fighters
- 3.4.2. The provision of safe conditions for residents
- 3.4.3. Ensure adequate and safe access to and from the property
- 3.4.4. Ensure adequate and safe water supply to the property and the establishment of firefighting water reserves
- 3.4.5. Provide a system of fire breaks and trails to protect the building component
- 3.4.6. Remove vegetation that is considered dangerous and a hazard in Fire Conditions
- 3.4.7. To ascertain the required standard of construction of the buildings in accordance with the requirements of the National Construction Code and the Australian Standard for Construction in Bushfire Prone Areas or the provision of a satisfactory alternative solution
- 3.4.8. Facilitate the return to "normalcy "

3.5. Proposed Fire Fighting Infrastructure

- 3.5.1. The proposed buildings are to be served by a reliable reticulated water supply.

3.6. Building Construction

All construction is to be in accordance with Australian Standard AS 3959 2018 Construction of Buildings in Bush Fire-Prone Areas and the Level of construction assessed under "Site and Hazard Assessment."

3.7. Street Numbering

Numbering is to be installed in accordance with the current Street Numbering System at time of completion of building.

3.8. Less Flammable Landscaping

Any new landscaping within the development area is to be Less Flammable, in accordance with the list enclosed as an Appendix at the rear of this Report, rainforest species, or cultivated gardens, and comply with the requirements of " *Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest*" *Natural Hazards , Risk and Resilience-Bushfire*" published by QFES and Queensland Government, and "Natural hazards, risk and resilience-Bushfire-Assessment Benchmark 5" which cite a maximum Fuel Load of 8t/ha for revegetation or rehabilitation within bushfire prone areas.

"Bushfire Resilient Building Guidance for Queensland Homes" published by Qld State Government provides a schedule of species in Appendix E.

<https://www.qra.qld.gov.au/bushfireguideline>

3.9. Insurance

Failure to comply with this management report may have a detrimental effect upon the Insurance of the subject Buildings.

3.10. Emergency Response Procedures

In the event of Fire Emergency, assistance is to be obtained by dialling 000

- 3.10.1. The owner should read thoroughly the brochures contained and those recommended at the rear of this report. They contain valuable information that could assist in the saving of lives and property in a fire event!

3.11. Community Awareness Strategies

- 3.11.1. Each subsequent owner is to be provided with a copy of this Fire Management report with an alert placed on either Title or Council Rate searches that the Report is in existence and is to be made available to ensuing owners.

3.12. Administering Staff

It is the responsibility of the developers and owners to ensure compliance with this Report and the Town Plan, and to ensure that each of the new owners is provided with a copy of this report.

It is the responsibility of the Council and the Building Certifier to ensure that the relevant measures required by this management report are in place prior to the final completion stage inspection of any buildings on any sites which are the subject of this report as noted in Clause 3.1 of this report.

It is the responsibility of the ensuing owners of the properties to maintain the properties in the conditions outlined in this report.

4. FIRE MANAGEMENT ACTION SUMMARY AND SCHEDULE

DEVELOPMENT REQUIREMENTS	BUILDING REQUIREMENTS	MAINTENANCE
	Buildings to comply with the Australian Standard for Construction within Bush Fire Prone Areas.	Building materials are to be maintained in "as new" condition to preserve the integrity of the relevant materials.

5. APPENDICES

- 5.1. Form 15
- 5.2. Site Plans
- 5.3. Supporting Information:
 - 5.3.1. Vegetation Documentation

Note. These items below are referenced for information purposes only and are not to be construed as being part of the management report

This information is generic and not provided for approval purposes.

It is only provided for end user knowledge

- 5.3.2. Planning Regulation Fact Sheet December 2019
- 5.3.3. Prepare. Act. Survive
- 5.3.4. Rural property Fire Management Guide 2010
- 5.3.5. Notes for Landholders
- 5.3.6. Bushfire Action Guide
- 5.3.7. Bushfire Safety in Urban Fringe Areas
- 5.3.8. Water + Power -Vital for Fire fighting
- 5.3.9. Less Flammable Vegetation
- 5.3.10. Fire Retardant Native Plants
- 5.3.11. Tree selection for Fire-Prone Areas
- 5.3.12. Bushfire Resilient Building Guidance for Queensland Homes Appendix E
- 5.3.13. First Draft (specifying timber in bush fire zones)
- 5.3.14. External water spray system
- 5.3.15. Fire Retardant Coating Solutions
- 5.3.16. Archicentre Bushfire Design Guide
- 5.3.17. Section 3.8 Sign Types - Fire Trail Signage of the GCCC Natural Areas Management Unit (Page 16) Signage Guidelines
- 5.3.18. Trail Number and Key Point signage
- 5.3.19. Bushfire Hydrant detail
- 5.3.20. Tank detail
- 5.3.21. Recycled Water for Firefighting
- 5.3.22. Sample Easement Document
- 5.3.23. Bushfire Windows and Shutters
- 5.3.24. A guide to retrofit your home for better protection from a bushfire.
- 5.3.25. FireFly BAL-FZ System
- 5.3.26. Bushfire Planning and Design Certification Scheme Update
- 5.3.27. Eaves Water System
- 5.3.28. Aussi Ember Guard
- 5.3.29. The Australian "False Alarm: the great rainforest fire that wasn't"
- 5.3.30. Hijacking Australian 2019 Bushfire Tragedies to Fearmonger Climate Change
- 5.3.31. Bushfires have been in Australia for over 60 million years

We also recommend that the landholder obtains and reads the following;

- 5.3.32. Bushfire Hazard Planning in Queensland
 - 5.3.33. Protecting your home against Bushfire
- Both available from the Dept. of Local Government and Planning, and

- 5.3.34. Fire in Bushland Conservation
- Available from Queensland Heritage Trust.

- 5.3.35. Bushfire Resilient Building Guidance for Queensland Homes
- <https://www.qra.qld.gov.au/bushfireguideline>

Signed

.....
 Eldon Bottcher
 Grad. Dip. DBPA (UWS) Dip. Arch. (QIT), Cert. R.F.M. (USQ), F.R.A.I.A., M.A.I.E.S. AIFireE
 Architect
 BPAD-L3 Practitioner



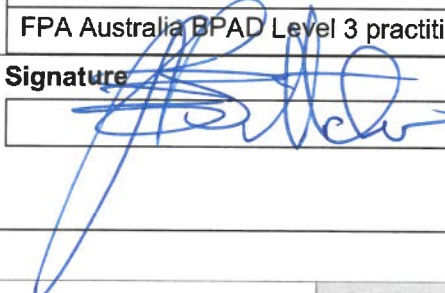
**APPENDIX 5.1
FORM 15**

Form 15—Compliance certificate for building design or specification

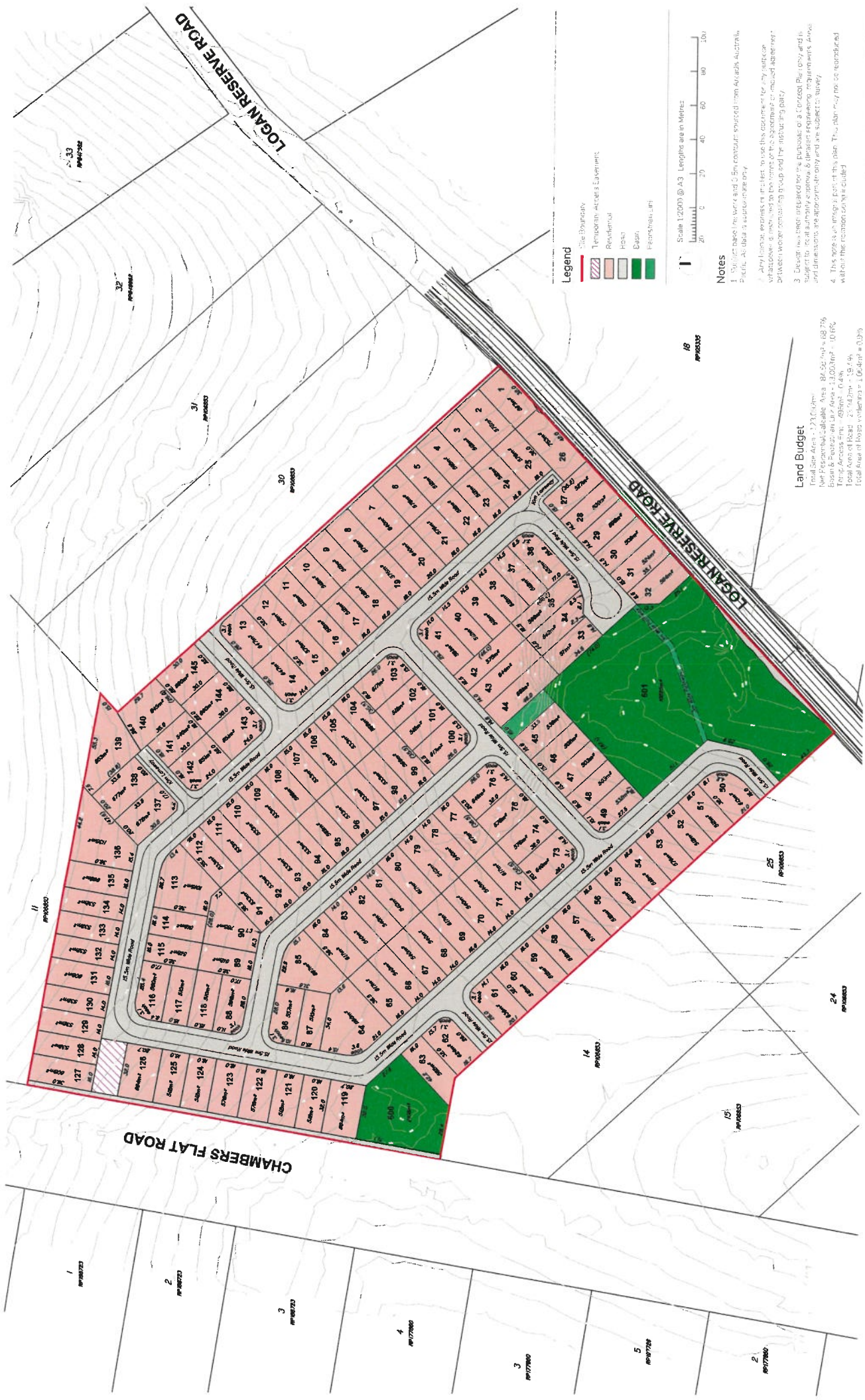
This form is to be used by an appointed competent person for the purposes of section 10 of the *Building Act 1975* and sections 73 and 77 of the *Building Regulation 2012*(Design-specification certificate) stating that an aspect of building work or specification will, if installed or carried out as stated in this form, comply with the building assessment provisions.

Additional explanatory information is included in the Appendix at the end of this form.

<p>1. Property description</p> <p>This section need only be completed if details of street address and property description are applicable.</p> <p>E.g. in the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.</p> <p>The description must identify all land the subject of the application.</p> <p>The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.</p> <p>If the plan is not registered by title, provide previous lot and plan details.</p>	<p>Street address (include no., street, suburb/locality and postcode)</p> <p>680-688 & 690-702 Chambers Flat Road and 691-697, 699-705,707-713 & 715- 704 Postcode</p> <p>Lot and plan details (attach list if necessary)</p> <p>Lots 12,13,26,27,28 & 29 on RP106853</p> <p>In which local government area is the land situated?</p> <p>Logan City Council</p>
<p>2. Description of component/s certified</p> <p>Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.</p>	<p>Work as required for bushfire mitigation purposes as set out in the Bushfire Management Report prepared by Eldon Bottcher Architect Pty Ltd including assessment of Construction Levels assessed under AS 3959.</p>
<p>3. Basis of certification</p> <p>Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications, were relied upon.</p>	<p>Compliance with the Bushfire Management Report prepared by Eldon Bottcher Architect Pty Ltd</p> <p>No certification of components covered by The Building Act 1975, The building Code of Australia or AS 3959.</p> <p>Logan City Council Town Plan Bushfire Management Constraint code.</p>
<p>4. Reference documentation</p> <p>Clearly identify any relevant documentation, e.g. numbered structural engineering plans.</p>	<p>Bushfire Management Report FM 5464-1</p>

<p>5. Building certifier reference number and building development application number</p>	<p>Building certifier reference number</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <p>Building development application number (if available) Not Available</p>
<p>6. Appointed Competent person details <small>Under Part 6 of the Building Regulation a person must be assessed as competent for the type of work (design -specification) by the relevant building certifier.</small></p>	<p>Name (in full) Eldon John Bottcher</p> <p>Company name (if applicable) Contact person Eldon Bottcher Architect Pty Ltd Eldon Bottcher</p> <p>Phone no. (business hours) Mobile no. Fax no. 07 55920082 0412434134 </p> <p>Email address bushfires@eb-a.com.au</p> <p>Postal address P.O.Box 3606 Robina Town Centre Postcode 4230</p> <p>Licence Class or registration type (if applicable)</p> <p>.....</p> <p>Licence or registration number (if applicable) Reg Architect Qld 1325 FPA Australia BPAD Level 3 practitioner 16935</p>
<p>7. Signature of appointed competent person <small>This certificate must be signed by the individual assessed by the building certifier as competent to give design-specification help.</small></p>	<p>Signature Date  7 July 22</p>
LOCAL GOVERNMENT USE ONLY	
Date received	Reference Number/s

**APPENDIX 5.2
SITE PLANS**



- Legend**
- Site Boundary
 - Temporary Access Laydowns
 - Residential
 - Kerb
 - Drain
 - Planting/Landscaping

Scale 1:2000 @ A3 Lengths are in Metres

Notes

1. All lot names, footprints and 0.5m contours sourced from Aerials, Australia. All dimensions are in metres unless otherwise stated.
2. Any lot lines, easements or other features shown on this plan are for information only and do not constitute a guarantee of accuracy. The client is responsible for verifying the accuracy of the information shown on this plan.
3. Design notes are prepared for the purpose of a Concept Plan only and are subject to final authority of the engineer and designer. All dimensions and dimensions are approximate only and are subject to survey.
4. This plan is an integral part of this plan. The client is responsible for obtaining all necessary approvals and permits.

Land Budget

Total Site Area: 27.10 Ha
 Total Road Area: 1.80 Ha (6.6%)
 Total Footpath Area: 0.40 Ha (1.5%)
 Total Kerb Area: 0.10 Ha (0.4%)
 Total Area of Road: 2.30 Ha (8.5%)
 Total Area of Road: 2.30 Ha (8.5%)
 Total Area of Road: 2.30 Ha (8.5%)

CONCEPT PLAN

680-668, 690-712, Chambers Flat Road & 691-697, 695-705,
 707-713, 715-721 Logan Reserve Road, Logan Reserve

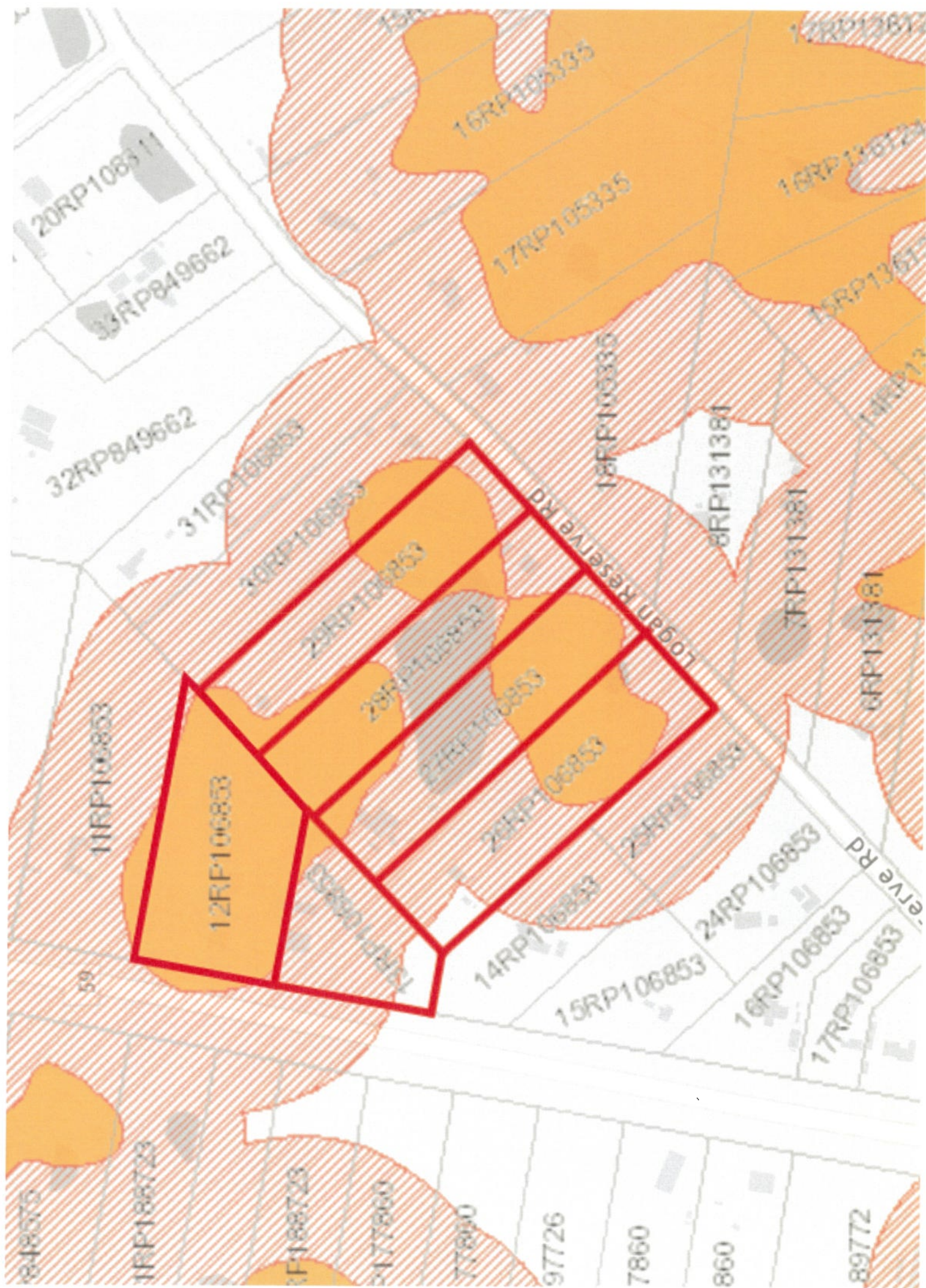
CLIENT - CIVITY (Gold Coast)

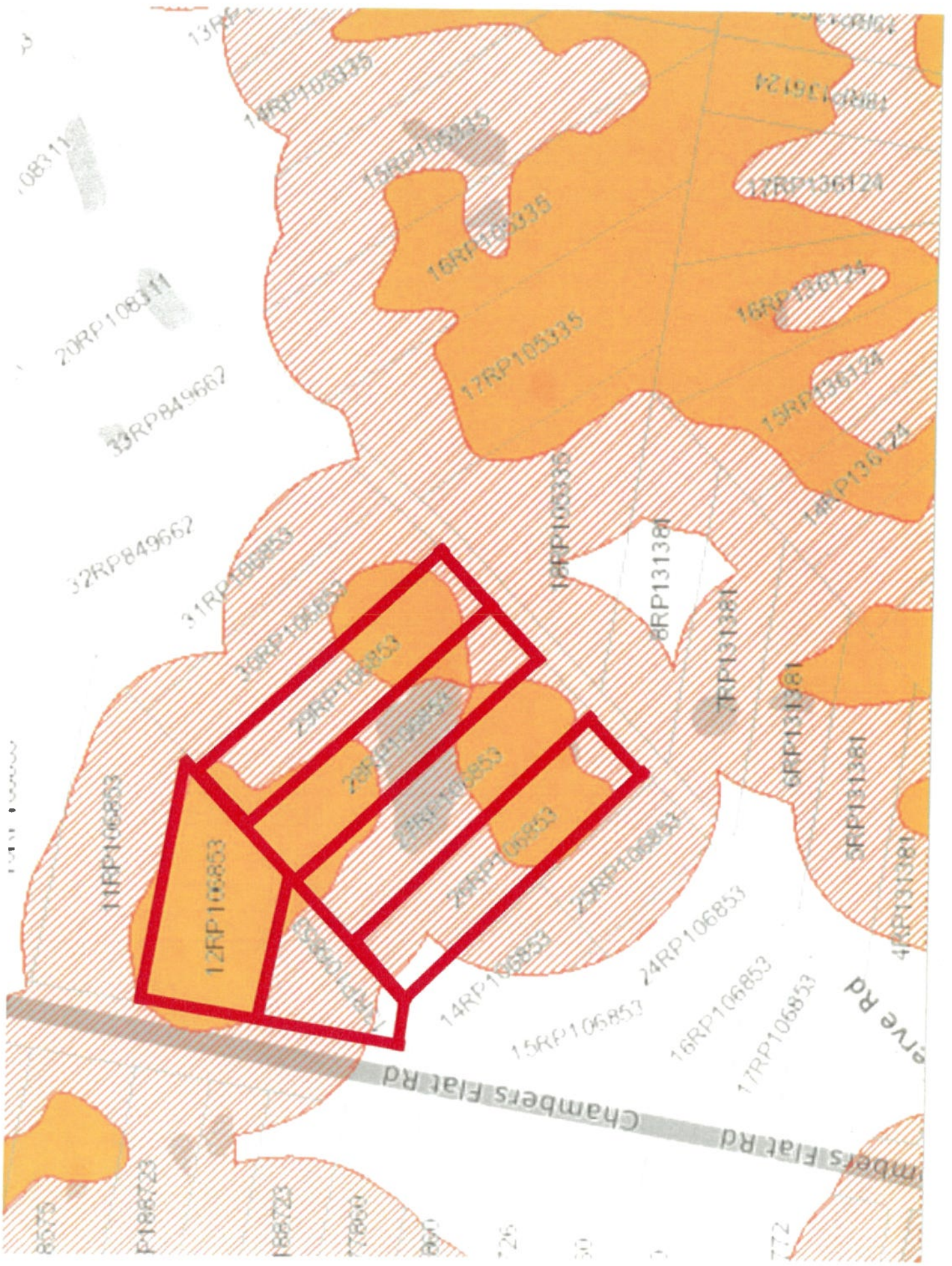
DRAWING NO.	SHEET NO.	DATE DRAWN	VERSION
22-0223LJ_03	1 of 1	06-07-2022	A
COUNCIL	DESCRIPTION	Lots 12, 13, 26, 27, 28 & 29 on RP106853	
Logan City			



APPENDIX 5.3
SUPPORTING INFORMATION

(NOTE: SOME OF THIS INFORMATION IS GENERIC AND NOT PROVIDED FOR APPROVAL PURPOSES. IT IS ONLY PROVIDED FOR END USER KNOWLEDGE)







State-wide Bushfire Prone Area Mapping

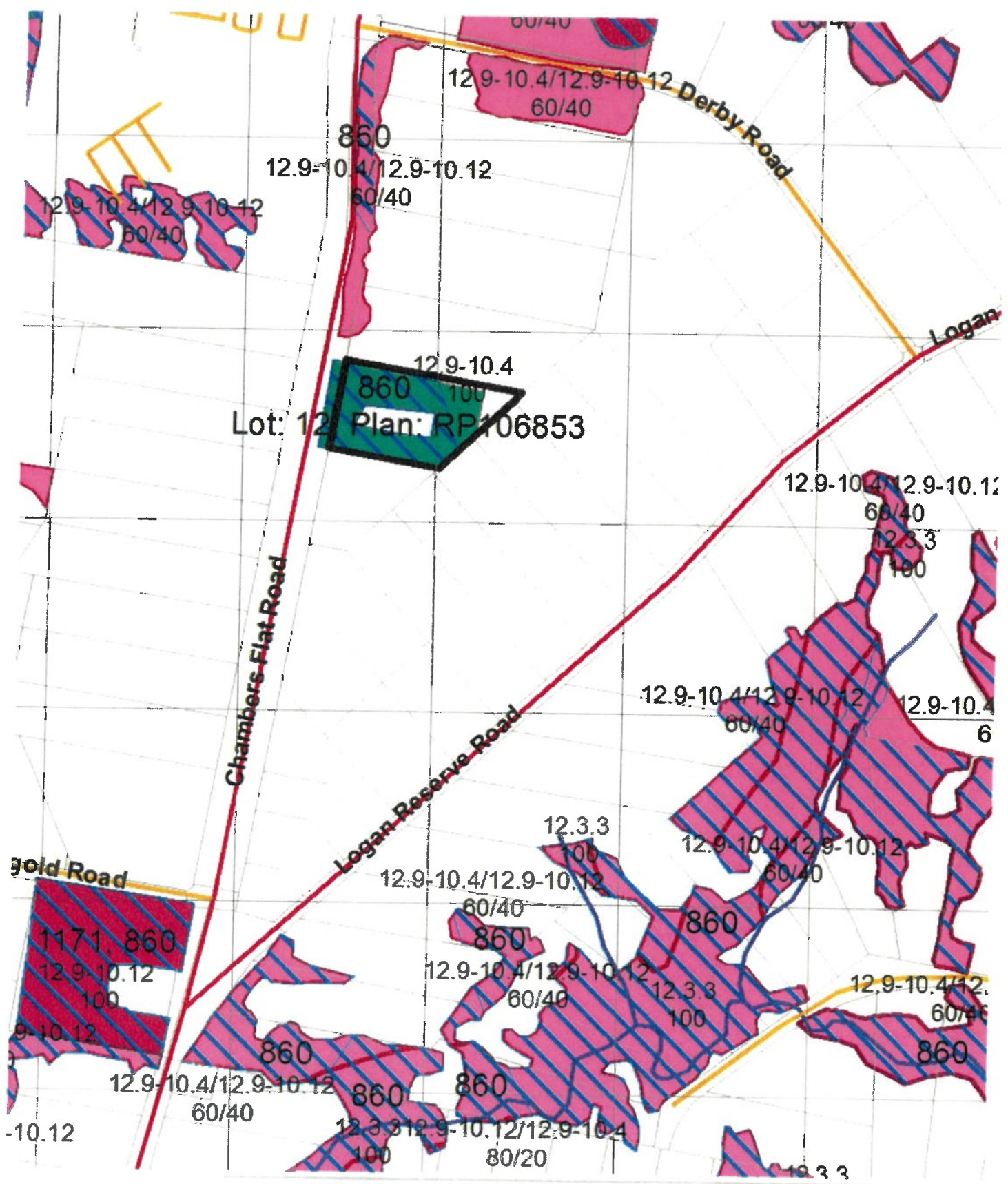
Vegetation Hazard Class Descriptions and Fuel Characteristics – Jan 2017

Vegetation Hazard Class	Potential Fuel Load (t/ha)						Prone Type ¹		Fuel Continuity ²	
	Surface	Near Surface	Elevated	Bark	Total (Remnant)	Total (Non-Remnant)	Remnant	Non-Remnant	Remnant	Non-Remnant
1.1 <i>Complex mesophyll to notophyll vine forests</i>	2.6	0.0	0.0	0.0	2.6	12.0	3	1	2	1
2.1 <i>Complex to simple, semi-deciduous mesophyll to notophyll vine forest</i>	3.5	0.0	0.0	0.0	3.5	12.0	3	1	2	1
3.1 <i>Notophyll vine forest</i>	4.5	0.0	0.0	0.0	4.5	12.0	3	1	2	1
3.3 <i>Notophyll vine thicket</i>	4.4	0.0	0.0	0.0	4.4	12.0	3	1	2	1
4.1 <i>Notophyll and notophyll palm or vine forest</i>	4.5	0.0	0.0	0.0	4.5	12.0	3	1	2	1
5.1 <i>Notophyll to microphyll vine forests</i>	3.9	0.0	0.0	0.0	3.9	12.0	3	1	2	1
5.2 <i>Notophyll to microphyll vine forest with sparse overstorey</i>	3.9	0.0	0.0	0.0	3.9	12.0	3	1	2	1
5.5 <i>Sedgeland within Notophyll to microphyll vine forests</i>	3.9	0.0	0.0	0.0	3.9	12.0	3	1	2	1
6.1 <i>Montane Notophyll vine forest and microphyll fern forest</i>	3.9	0.0	0.0	0.0	3.9	12.0	3	1	2	1
6.3 <i>Montane Notophyll vine thicket and microphyll fern thicket</i>	3.9	0.0	0.0	0.0	3.9	12.0	3	1	2	1
7.1 <i>Semi-evergreen to deciduous microphyll vine forest</i>	6.0	0.0	0.0	0.0	6.0	12.0	3	1	2	1
7.2 <i>Sparse semi-evergreen to deciduous microphyll vine forest</i>	6.0	0.0	0.0	0.0	6.0	12.0	3	1	2	1
8.1 <i>Wet eucalypt tall open forest</i>	28.0	3.0	2.0	2.0	35.0	35.0	1	1	1	1
8.2 <i>Wet eucalypt tall woodland</i>	18.0	3.1	1.7	1.0	23.8	23.8	1	1	1	1
9.1 <i>Moist to dry eucalypt open forests on coastal lowlands and ranges</i>	17.5	3.5	2.2	1.0	24.2	24.2	1	1	1	1
9.2 <i>Moist to dry eucalypt woodland on coastal lowlands and ranges</i>	11.4	3.5	1.3	1.0	17.2	17.2	1	1	1	
9.3 <i>Shrubland within moist to dry eucalypt on coastal lowlands and ranges</i>	7.8	3.0	1.9	0.0	12.7	12.7	1	1	1	1
10.1 <i>Spotted gum dominated open forests</i>	16.3	3.0	1.5	0.0	20.8	20.8	1	1	1	1
10.2 <i>Spotted gum dominated woodlands</i>	14.0	3.0	1.0	0.0	18.0	18.0	1	1	1	1
11.2 <i>Moist to dry eucalypt woodlands on basalt areas</i>	7.5	4.0	0.5	1.0	13.0	13.0	1	1	1	1
12.1 <i>Dry eucalypt open forest on sandstone and shallow soils</i>	15.0	3.5	1.5	1.0	21.0	21.0	1	1	1	1
12.2 <i>Dry eucalypt woodlands on sandstone and shallow soils</i>	12.0	2.6	1.8	1.0	17.4	17.4	1	1	1	1
13.1 <i>Dry to moist eucalypt open forests on undulating metamorphics and granite</i>	15.9	3.5	1.4	1.0	21.8	21.8	1	1	1	1

¹ Prone Type: 1 = Bushfire Prone, 2 = Grass Fire Prone, 3 = Low Hazard

² Fuel Continuity: 1 = Continuous, 2 = Discontinuous

REB	REB Label	VHC	VHC DESC
12.9-10.11	Melaleuca lrybana low open forest on sedimentary rocks	21.1	21.1 Melaleuca dry open forest on sandplains or depositional plains
12.9-10.11a	Eucalyptus citriodora subsp. variegata and/or E. moluccana, E. tereticornis, E. crebra open forest with Melaleuca lrybana understorey on sedimentary rocks	21.1	21.1 Melaleuca dry open forest on sandplains or depositional plains
12.9-10.12	Eucalyptus seeana, Corymbia intermedia, Angophora leiocarpa woodland on sedimentary rocks	9.2	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
12.9-10.12a	Eucalyptus interstans, Angophora leiocarpa ± Corymbia intermedia, E. tereticornis woodland on sedimentary rocks occurring near Esk	9.2	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
12.9-10.13	Eucalyptus corynodes woodland on sedimentary rocks	12.2	12.2 Dry eucalypt woodlands on sandstone and shallow soils
12.9-10.14	Eucalyptus pilularis tall open forest on sedimentary rocks	8.1	8.1 Wet eucalypt tall open forest
12.9-10.14a	Eucalyptus grandis, Lophostemon confertus, E. microcorys, Syncarpia glomulifera ± E. pilularis open forest on sedimentary rocks occurring in moist coastal areas	8.1	8.1 Wet eucalypt tall open forest
12.9-10.14b	Eucalyptus pilularis mixed open forest on sedimentary rocks in dry sub coastal areas	8.1	8.1 Wet eucalypt tall open forest
12.9-10.15	Semi-evergreen vine thicket with Brachychiton rupestris on sedimentary rocks	7.1	7.1 Semi-evergreen to deciduous microphyll vine forest
12.9-10.16	Araucarian microphyll to notophyll vine forest on Cainozoic and Mesozoic sediments	5.1	5.1 Notophyll to microphyll vine forests
12.9-10.17	Eucalyptus acmenoides, E. major, E. siderophloia ± Corymbia citriodora subsp. variegata woodland on sedimentary rocks	9.2	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
12.9-10.17a	Lophostemon confertus dominated open forest on sedimentary rocks	28.1	28.1 Open forests in coastal locations with species such as she-oak or swamp box
12.9-10.17b	Corymbia citriodora subsp. variegata ± Eucalyptus acmenoides, Angophora leiocarpa, E. siderophloia open forest on Cainozoic and Mesozoic sediments	10.1	10.1 Spotted gum dominated open forests
12.9-10.17c	Eucalyptus carnea and/or Eucalyptus tindaliae open forest on Cainozoic and Mesozoic sediments	9.1	9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges
12.9-10.17d	Open forest generally containing Eucalyptus siderophloia, E. propinqua, Corymbia intermedia on sedimentary rocks	9.1	9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges
12.9-10.17e	Eucalyptus acmenoides, E. propinqua, Corymbia intermedia ± E. microcorys, Lophostemon confertus open forest on sedimentary rocks	9.1	9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges
12.9-10.18	Angophora leiocarpa, Eucalyptus crebra woodland on sedimentary rocks	9.2	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
12.9-10.18a	Angophora leiocarpa, Eucalyptus crebra open forest with a sub canopy of Lophostemon suaveolens occurring in gullies on sedimentary rocks	9.1	9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges
12.9-10.18b	Angophora leiocarpa, Eucalyptus axserta and Callitris endlicheri woodland on sedimentary rocks	9.2	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
12.9-10.19	Eucalyptus fibrosa subsp. fibrosa woodland on sedimentary rocks	12.2	12.2 Dry eucalypt woodlands on sandstone and shallow soils
12.9-10.19a	Corymbia henryi ± Eucalyptus fibrosa subsp. fibrosa, Corymbia citriodora subsp. variegata open forest on sedimentary rocks	10.1	10.1 Spotted gum dominated open forests
12.9-10.1x1	Eucalyptus resinifera, E. grandis, Corymbia intermedia tall shrubby open forest often on remnant Tertiary surfaces	9.1	9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges
12.9-10.2	Corymbia citriodora subsp. variegata ± Eucalyptus crebra open forest on sedimentary rocks	10.1	10.1 Spotted gum dominated open forests
12.9-10.20	Eucalyptus montivaga woodland on sedimentary rocks	8.2	8.2 Wet eucalypt tall woodland
12.9-10.21	Eucalyptus acmenoides or E. portuensis woodland usually with Corymbia trachyphloia subsp. trachyphloia on Cainozoic to Proterozoic sediments	9.2	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
12.9-10.22	Closed sedge/land/shrubland on sedimentary rocks. Coastal parts	34.5	34.5 Sedge/land dominated wetlands
12.9-10.23	Eucalyptus melanoleuca open forest on sedimentary rocks	9.1	9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges
12.9-10.24	Eucalyptus suffulgens open forest on sedimentary rocks	9.1	9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges
12.9-10.3	Eucalyptus moluccana open forest on sedimentary rocks	13.1	13.1 Dry to moist eucalypt open forests on undulating metamorphics and granite
12.9-10.4	Eucalyptus racemosa subsp. racemosa woodland on sedimentary rocks	9.2	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
12.9-10.5	Woodland complex often with Corymbia trachyphloia subsp. trachyphloia, C. citriodora subsp. variegata, Eucalyptus crebra, E. fibrosa subsp. fibrosa on quartzose sandstone	9.2	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
12.9-10.5a	Eucalyptus heildonica, Corymbia citriodora subsp. variegata ± C. trachyphloia subsp. trachyphloia, Eucalyptus fibrosa subsp. fibrosa, E. taurina open forest on quartzose sandstone in the Heildon hills region	9.1	9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges
12.9-10.5b	Eucalyptus decorticans ± Corymbia trachyphloia subsp. trachyphloia woodland on quartzose sandstone	12.2	12.2 Dry eucalypt woodlands on sandstone and shallow soils
12.9-10.5c	Eucalyptus psammitica and/or E. baileyana woodland often with E. planchoniana, E. tindaliae, E. carnea, E. resinifera and Angophora woodsiana on quartzose sandstone	12.2	12.2 Dry eucalypt woodlands on sandstone and shallow soils
12.9-10.5d	Eucalyptus eugenoloides, E. biturbinata or E. longirostrata, E. crebra, E. tereticornis and Corymbia trachyphloia woodland occurring on sedimentary rocks	9.2	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
12.9-10.6	Acacia harpophylla open forest on sedimentary rocks	25.1	25.1 Brigalow belt open forests on heavy clay soils
12.9-10.7	Eucalyptus crebra ± E. tereticornis, Corymbia tessellaris, Angophora spp., E. melanophloia woodland on sedimentary rocks	13.2	13.2 Dry to moist eucalypt woodlands on undulating metamorphics and granite
12.9-10.7a	Eucalyptus siderophloia, Corymbia intermedia ± E. tereticornis and Lophostemon confertus open forest on sedimentary rocks	12.1	12.1 Dry eucalypt open forest on sandstone and shallow soils
12.9-10.8	Eucalyptus melanophloia, E. crebra woodland on sedimentary rocks	17.2	17.2 Dry woodlands dominated by poplar box, silver-leaved ironbark or White's ironbark on sand or depositional plains
12.9-10.9	Shrubland/low woodland on sandstone lithosols	12.2	12.2 Dry eucalypt woodlands on sandstone and shallow soils



Lot: 12 Plan: RP106853

Chambers Flat Road

Logan Reserve Road

Derby Road

Gold Road

Logan

860
12.9-10.4/12.9-10.12
60/40

12.9-10.4
860 100

12.9-10.4/12.9-10.12
60/40
12.3.3
100

12.9-10.4/12.9-10.12
60/40
12.9-10.4
6

12.3.3
100

12.9-10.4/12.9-10.12
60/40

12.9-10.4/12.9-10.12
60/40

1171. 860
12.9-10.12
100

12.9-10.4/12.9-10.12
60/40

12.3.3
100

12.9-10.4/12.9-10.12
60/40

-10.12

12.9-10.4/12.9-10.12
60/40

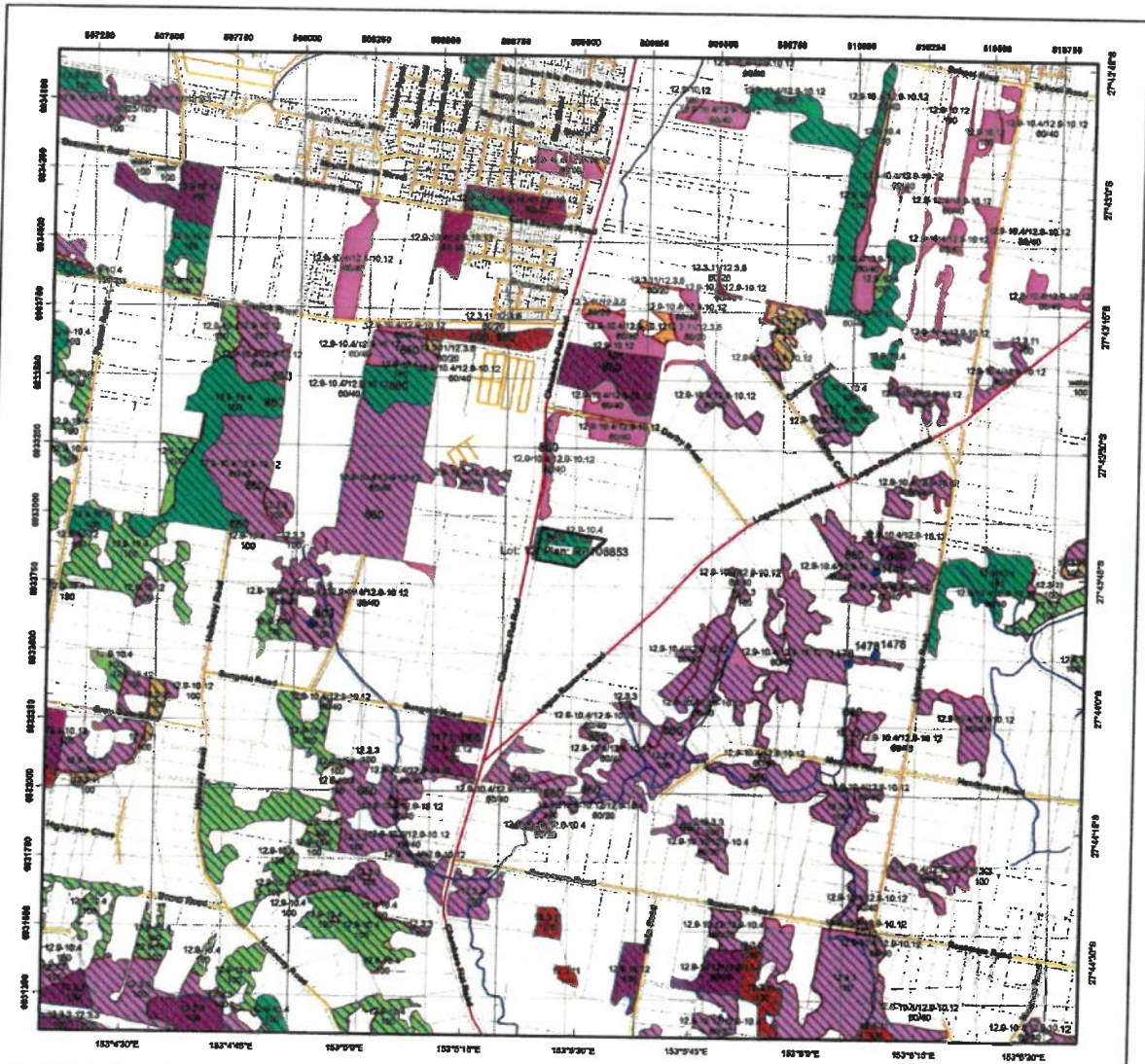
860

860

80/20

860

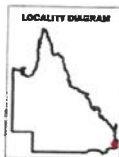
12.3.3



Vegetation Management Supporting Map

Legend

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



This product is projected into:
 GDA 1994 MGA Zone 56

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

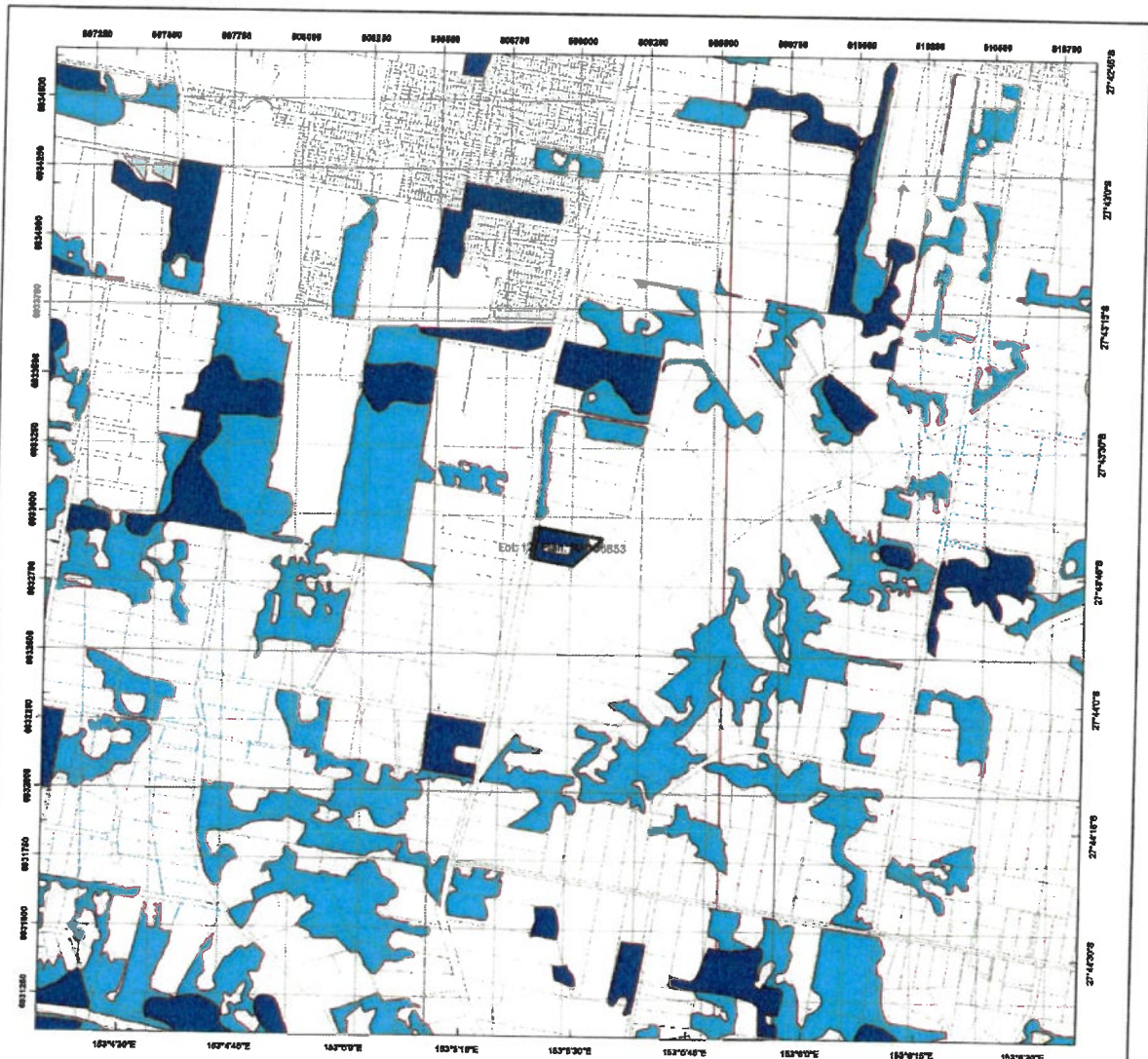
Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

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

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

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

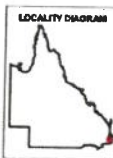
Land parcel boundaries are provided as locational aid only.



Regulated Vegetation Management Map

Legend

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



This product is projected into:
 GDA 1994 MGA Zone 56

Disclaimer:

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

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

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

Land parcel boundaries are provided as locational aid only.

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

6.PROFILES

ELDON BOTTCHER

EDUCATION AND QUALIFICATIONS

Graduate Diploma in Design in Bushfire Prone Areas
University of Western Sydney

Diploma in Architecture
Queensland Institute of Technology

Certificate of Rural Fire Management
University of Southern Queensland

Registered Architect
Queensland

A+ Architect
Australian Institute of Architects

FPA Australia Certified Practitioner (BPAD-Level 3-16935)

Bushfire Planning and Design (BPAD-LEVEL 3),
Alternate Solutions & DTS

PROFESSIONAL MEMBERSHIPS

Fellow

Australian Institute of Architects

Member

Australian Institute of Emergency Services

Member

Australian Institute of Engineers Society of Fire Safety

Member

Queensland Environmental Law Association.

Member Board of Experts

Bushfire Building Council of Australia

Associate Member

Institution of Fire Engineers

Corporate Member

Fire Protection Association of Australia

PROFESSIONAL EXPERIENCE

Director

Eldon Bottcher Architect Pty Ltd since 1978

Bushfire Assessment and Planning Consultant since 1998

Group Officer

Albert Rural Fire Brigades Group

Queensland Fire and Rescue Service

Group Officer

Gold Coast Rural Fire Brigades Group

Queensland Fire and Rescue Service

Group Officer

South East Regional Support Group

Queensland Fire and Rescue Service

Planning Officer

Gold Coast Rural Fire Brigades Group

Queensland Fire and Rescue Service

Member Practice Committee AIA Qld Chapter

BBCA representation to Australian Standards

Committee FP20 (AS 3959 & AS 5414)

Life Member

Guanaba Rural Fire Brigade

Member

Clagiraba Rural Fire Brigade

OTHER BUSHFIRE RELATED COURSES AND TRAINING

I.C.S./AIIMS (40 hr. course) in Incident Command Systems

Certificate 4 (Workplace Training and Assessment)

RFSQ Level 1

RFSQ Level 2 (Officer)

RFSQ Fire Management 1

RFSQ Crew Leader

Certificate II in Public Safety (Firefighting Operations)

Fire Weather 1

QELA Expert Witness Workshop 2020

BUSHFIRE RELATED AWARDS

National Planning Award

State Planning Award

Planning Institute of Australia

Gold Coast Bushfire Management Strategy

(Co-Initiator and Member of Preparation Committee)

Australian Government

National Medal

Long and Distinguished Service to Fire fighting

Queensland Fire and Rescue Service

Diligent and Ethical Service Medal + Clasp

Service to Fire fighting

Queensland Government

Australia Day Medallion

Services to Rural Fire Fighting

Queensland Government

Year of the Volunteer Medallion

Services to Fire fighting

UDIA

Best Consultancy Team Award in 2007.

SERVICES OFFERED

Bushfire management Reports

Bushfire Safety Engineering

Bushfire Planning and Design

Bushfire Hazard Assessment

Alternative Solutions

Expert Witnessing

(See Planning and Environment Court of Queensland Determination

File No. BD 624 of 2005 sections 28 to 35)

Continuing Professional Development Lectures

Tertiary Education Lectures and Tutorials

Town Planning Bushfire Codes for Local Authorities

Bushfire Burn Planning

General consultancy relating to all aspects of Bushfire