

# Bushfire Hazard Assessment

560 Chambers Flat Road, Logan Reserve

Prepared for CFR No. 3 Pty Ltd

Prepared by:

*Green Tape*  
SOLUTIONS

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## Acronyms and Glossary

Terms	Definitions
<b>APZ</b>	Asset Protection Zone
<b>BAL</b>	Bushfire Attack Level
<b>BCA</b>	Building Code of Australia
<b>BHA</b>	Site-specific bushfire hazard assessment
<b>BMP</b>	Bushfire Management Plan
<b>BPA</b>	Bushfire Prone Areas
<b>BRC</b>	Bushfire Resilient Communities
<b>DCCEEW</b>	Department of Climate Change, Energy, the Environment and Water (Cwth)
<b>DES</b>	Department of Environment and Science (QLD)
<b>DOR</b>	Department of Resources (QLD)
<b>DSDILGP</b>	State Development, Infrastructure, Local Government and Planning (QLD)
<b>ERP</b>	Emergency Response Plan
<b>GTRE</b>	Ground-truthed regional ecosystem
<b>HSE</b>	Health Safety and Environment
<b>IPA</b>	Inner Protection Area
<b>OPA</b>	Outer Protection Area
<b>QDC</b>	Queensland Development Code
<b>QFES</b>	Queensland Fire Emergency Services
<b>RE</b>	Regional ecosystem
<b>SARA</b>	State assessment and referral agency
<b>SDAP</b>	State development assessment provisions
<b>Site</b>	Refers to the area within which development, over- and under-ground services, access tracks and other associated infrastructure may be located.
<b>Site boundary</b>	The extent of the properties that the project is located within
<b>SPP</b>	State Planning Policy
<b>VM Act</b>	<i>Vegetation Management Act 1999 (Qld)</i>

# 1 Introduction

## 1.1 Background

Green Tape Solutions was engaged by CFR No. 3 Pty Ltd to prepare a Bushfire hazard assessment (BHA for a site located at 560 Chambers Flat Road, Logan Reserve (described as Lot 4 on RP97736) (the 'site').

This report has been prepared to support a development application for a Reconfiguration of lot (RoL) for a 1 into 54-lot residential subdivision. The site currently supports an existing detached dwelling house and associated outbuildings and structures, including sheds and two dams, which shall be cleared for the proposed development. Access to proposed new lots will be provided through proposed road infrastructure from the east, north and west with connections proposed through future development in the immediate area. The proposed development layout is provided in **Appendix 1**.

## 1.2 Site Description

**Table 1** provides the detail of the development site. **Figure 2** depicts the location of the site.

**Table 1: Property Information**

<b>Address</b>	560 Chambers Flat Road, Logan Reserve
<b>Lot / Plan</b>	Lot 4 on RP97736
<b>Area (m<sup>2</sup>)</b>	49,350 m <sup>2</sup> (4.93 ha)
<b>LGA</b>	Logan City Council
<b>Zone</b>	Emerging Community

The site is located on a single lot comprising a total area of approximately 49,350 m<sup>2</sup> (4.93 ha) within the Logan City Council (LCC) local government area (**Figure 1**). The site is bounded by Chambers Flat Road to the west and large rural residential lots to the north, east and south that are currently under varying degrees of ongoing development and subdivision for residential development.

The site has been historically cleared of native vegetation in favour of cropping land which has since been abandoned. A more detailed description of the vegetation communities within and surrounding the site is provided in **Section 3.1.2**

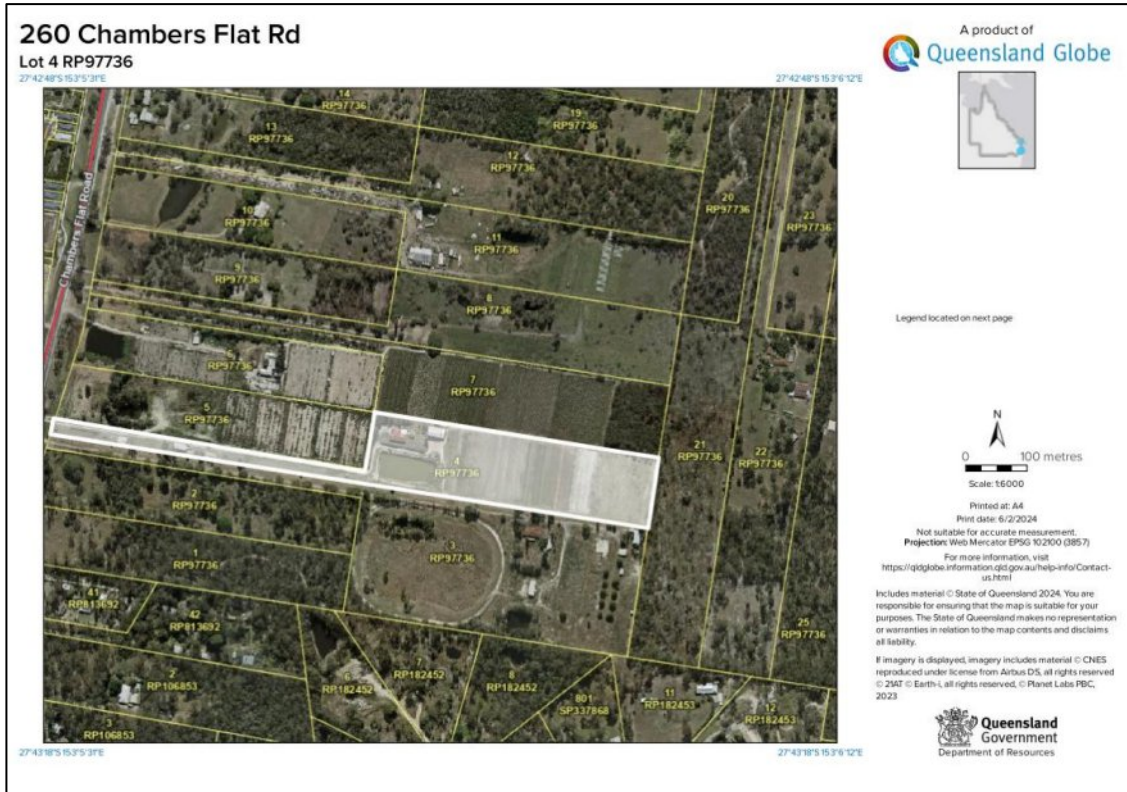


Figure 1: Site Location (Source: Queensland Globe)

### 1.3 Scope of Work

The purpose of this BHA is to provide a site-specific assessment of bushfire hazard and to assess compliance of the proposed development with the outcomes sought by the Logan Planning Scheme 2015 (Version 9.1), in particular the assessment benchmarks outlined in the Bushfire hazard overlay code. Recommendations are consistent with legislative requirements to reduce the risk to life and property.

### 1.4 Qualifications and Experience

The Queensland Fire and Emergency Service (QFES) *Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and resilience – Bushfire' October 2019* ('BRC Technical Guide') (QFES, 2019) provides guidance on suitably qualified people for assessments identified in the BRC Technical Guide. This guidance includes the following recommendations:

- Fine-scale assessment of vegetation communities in accordance with the 'Vegetation Hazard Class' assessment methodology be undertaken by a suitably qualified person with experience in botanical survey methods; and
- Applicant-initiated assessments and reports be prepared or peer-reviewed by suitably qualified and experienced people with degree (AQF Level 8) qualifications in environmental science, environmental management (or an equivalent discipline), demonstrated experienced in botanical surveys and spatial analysis methods, including use of geographic information

systems (GIS) software); demonstrated experience in the assessment of bushfire hazard and risks or technical qualifications in environmental science, environmental management (or and equivalent discipline) and demonstrated relevant industry experience in the assessment of bushfire hazard and risks for a minimum of five years.

The author of this report meets Council and QFES' criteria as follows:

- possesses knowledge and experience in applying relevant legislation, plans, policies, standards and guidelines relating to bushfire hazard and fire ecology relating to Queensland requirements and South-east Queensland conditions;
- has knowledge, experience in botanical survey methods and GIS analysis and at least 5 years' experience in undertaking bushfire hazard assessment and preparing bushfire management plans, including experience in undertaking fine-scale assessment of vegetation communities and application of the QFES Bushfire Hazard Assessment methodology outlined in the BRC Technical Guide; and
- has qualifications and experience in the field of ecology, environmental management or similar to assess and protect site-based and strategic biodiversity values relating to South-east Queensland.

## 2 Bushfire Regulatory Framework

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Given that bushfire hazard can cause harm to people and social wellbeing, damage to property and impacts to the economy and environment, the management of bushfire hazard in Queensland is considered an integral component of land use planning and development decisions.

There are four regulatory mechanisms/instruments applicable to the site that regulate development to avoid and mitigate potential impacts associated with bushfire hazard:

- National Construction Code 2022
- State Planning Policy (SPP) and associated guidelines (Department of Infrastructure, Local Government and Planning (DILGP), July 2017);
- Logan Planning Scheme 2015 (Version 9.1) (Logan City Council, 2024); and
- Australian Standard AS3959:2018 – Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2018).

### 2.1 National Construction Code 2022

The National Construction Code 2022 (NCC 2022) sets out requirements for the design and construction of a building in Australia, including minimum required levels for the safety of certain buildings. The NCC contains additional requirements for the construction of buildings in designated bushfire prone areas, to address additional risks posed by bushfire attack. The NCC is given legal effect through the *Building Act 1975* (Qld) and is varied through amendments to the *Building Regulation 2006* that adopts the Queensland Development Code (QDC). Logan City Council's Bushfire hazard overlay mapping designates bushfire prone areas for the purposes of the National Construction Code, the *Building Regulation 2006* and the Queensland Development Code (QDC).

### 2.2 State Planning Policy (SPP)

The SPP identifies the Queensland Government's policies about matters of state interest in land use planning and development (Department of Infrastructure, Local Government and Planning (DILGP), July 2017). The SPP is a broad and comprehensive statutory planning instrument. It sits above regional plans, standard planning scheme provisions and local government planning schemes within the hierarchy of planning instruments outlined in the *Planning Act 2016*.

The SPP is supported by the following guidance material:

- The SPP state interest guidance material - Natural hazards, risk and resilience - Bushfire ('SPP guidance') (DSDMIP, 2019), which provides further context to the SPP and explains how the SPP policies can be applied, in particular for local government when making or amending local planning instruments. The SPP guidance is also intended to assist assessment managers and practitioners in applying the SPP assessment benchmarks when state interests have not been integrated into the local planning scheme (where applicable).
- The 'BRC – Technical Reference Guide for the State Planning Policy State Interest - Natural Hazards, Risk and Resilience – Bushfire ('BRC Technical Guide') (QFES, 2019), which provides technical guidance and policy positions of the Queensland Fire and Emergency Services

(QFES). It includes procedures for undertaking a bushfire hazard assessment (BHA), calculating asset protection zones and preparing a Bushfire Management Plan.

The SPP assessment benchmarks outlined in Part E of the SPP and Section 4.0 of the SPP guidance apply to development to the extent that the development is assessable against a planning scheme and only to the extent that the planning scheme is inconsistent with the SPP.

The SPP is also supported by a state-wide map of bushfire prone areas (BPA) (also referred to as 'bushfire hazard area') that was developed based on the CSIRO modelling of potential fireline intensity using the methodology described by Leonard *et al.* (2014). The BPA mapping identifies areas of Very High (>40,000 kW/m), High (20,000 – 40, 000 kW/m) and Medium (4,000 – 20,000 kW/m) Potential Bushfire Intensity. The Potential Impact Buffer includes all land within 100 metres of any area with a potential fireline intensity greater than 4,000 kW/m (i.e. medium, high or very high bushfire hazard/potential bushfire intensity). This mapping triggers assessment against the State Planning Policy Assessment Benchmarks.

An excerpt from the SPP Assessment Benchmark – BPA mapping published on the SPP Interactive Mapping System (IMS) is provided in **Figure 2**. The site is mapped as containing areas of Medium Potential Bushfire Intensity and Potential Impact Buffer. In addition, land to the north, south and east is mapped as containing areas Medium Potential Bushfire Intensity and Potential Impact Buffer.

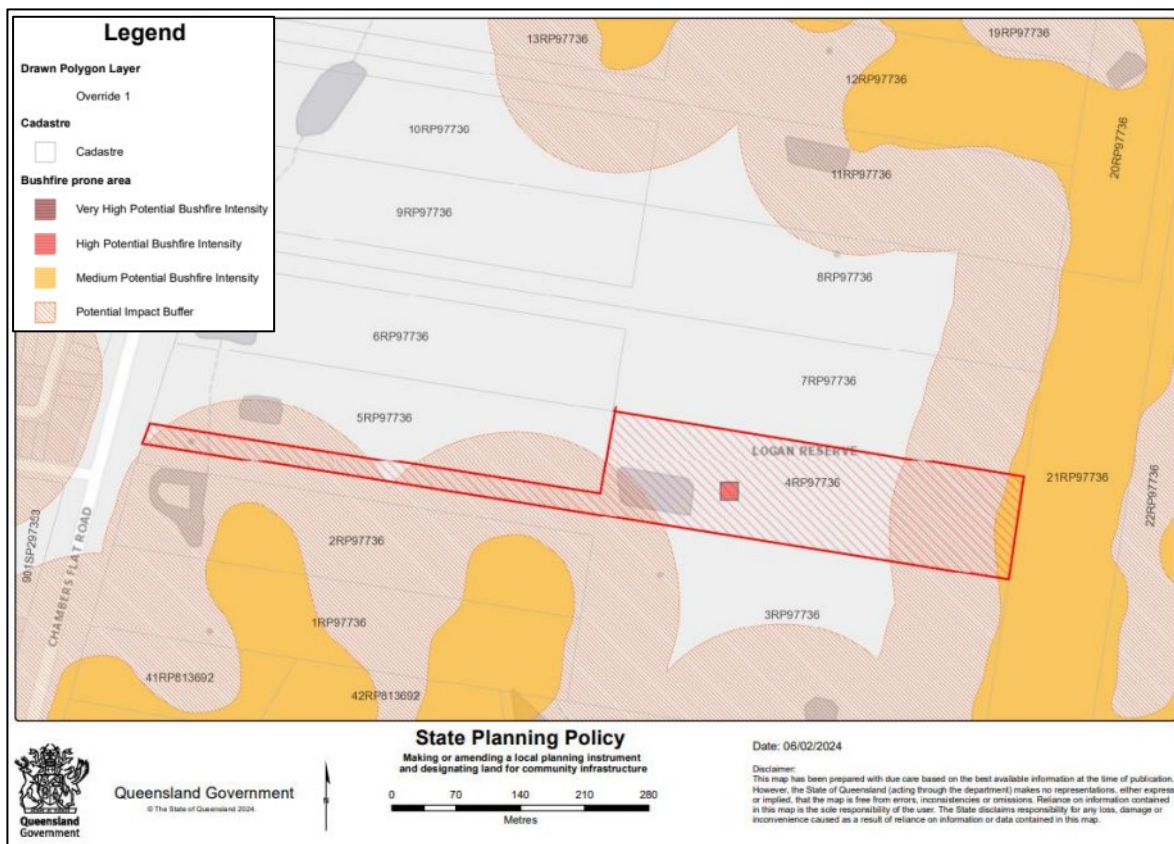


Figure 2: Excerpt from DSDMIP SPP IMS – Bushfire Prone Area (Source: DSDMIP SPP IMS)

### 2.3 Logan Planning Scheme 2015 (Version 9.1)

The site is located within the Logan City local government area and is subject to the provisions of the Logan Planning Scheme 2015 (Version 9.1). The planning scheme’s Bushfire hazard overlay maps the site as containing areas of Medium Potential Bushfire Intensity and Potential Impact Buffer. An excerpt from the overlay map identifying the mapped bushfire hazard areas in relation to the proposed development site is shown in **Figure 3**.

The Bushfire Hazard Overlay Code requires that development addresses the bushfire hazard determined by a site-specific bushfire hazard assessment based on vegetation existing within, adjacent and nearby to the site including any areas subject to, or likely to be subject to, ecological restoration (e.g., Council waterway corridors), revegetation or regrowth, which are to be assessed as if these areas have reached their mature state.

The Logan City Plan 2015 notes that a site-based assessment may be used to ground-truth the extent of hazardous vegetation and the extent and nature of the bushfire hazard area (bushfire prone area). The Logan City Plan 2015 Bushfire Planning Scheme Policy (PSP) requires that a bushfire hazard assessment be undertaken in accordance with either the PSP or the technical reference guidance for the State Planning Policy (SPP) i.e. the Bushfire Resilient Communities (BRC) document (QFES, 2019). The site-specific bushfire assessment provided in this plan has been undertaken in accordance with the BRC Technical Guide (QFES, 2019).



**Figure 3: Excerpt from Logan Planning Scheme 2015 (Version 9.1) – Bushfire Hazard Overlay (Source: Logan eplan, 2024).**

## **2.4 AS3959:2018 Construction of Buildings in Bushfire Prone Areas**

The Australian Standard *AS3959:2018 Construction of Buildings in Bushfire-Prone Areas* (Standards Australia, 2018) specifies the requirements for the construction of buildings in bushfire-prone areas in order to improve their resistance to bushfire attack. AS3959:2018 applies to those areas where a regulated map (i.e. a planning scheme overlay map) identifies an area as a bushfire prone area (or similar), requiring calculation of Bushfire Attack Level (BAL) in accordance with a methodology outlined in the standard.

AS3959:2018 thus prescribes the construction details for buildings depending on the calculated BAL. The detailed requirements relating to construction methods and materials are typically dealt with as part of building design and enabled via private certification in accordance with the Building Code of Australia.

## 3 Bushfire Hazard Assessment

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A site-specific bushfire hazard assessment (BHA) for the site has been undertaken in accordance with the methodology outlined in the 'Bushfire Resilient Communities' (BRC) technical document (QFES, 2019). The methodology underpinning the BHA process consists of three stages:

1. An assessment to verify the reliability of existing BPA mapping over the site and land surrounding the site (the 'assessment area').
2. A hazard assessment involving field investigations to ground-truth the accuracy of the BPA mapping for the site, where required. The hazard assessment area must include the development area and all land within 150 metres of the development footprint.
3. Using the results of the site-specific assessment, the asset protection zone width needed to achieve the requisite radiant heat flux levels is calculated using the SPP Bushfire asset protection zone (APZ) width calculator or Method 2 of AS3959:2018.

Where the precision and/or accuracy of BPA mapping or map input datasets are insufficient (e.g. where there has been changes in land use and vegetation cover within the assessment area), the process enables applicants to create a local-scale BPA map based on the results of the site investigation and to apply modified input variables that reflect changes that have occurred over time. The BHA process adapts the method used to generate the state-wide BPA mapping, described in Leonard *et. al.* (2014) with further refinement to allow for the downgrade and/or filtering of small patches and narrow corridors where needed in accordance with contemporary mapping rules outlined in the BRC technical guide and Leonard and Opie (2017).

Where effective fuel loads have been reduced based on patch size and isolation in accordance with the patch and corridor filtering rules outlined in 4.2.6 of the QFES BRC technical guide, reduced effective fuel loads can be used as inputs into a Method 2 BAL assessment.

The assessment has been based on vegetation existing within, adjacent and nearby to the site including any areas subject to revegetation or regrowth, which have been assessed as if these areas have reached their mature state.

### 3.1 Hazard Assessment

The following steps have been undertaken to assess spatial factors that contribute to potential bushfire intensity for the site and surrounding land:

- **Step 1: Identification of Fire weather severity**

Identification of all Forest Fire Danger Index (FFDI) values estimated at a 1:20 year (5%) Annual Exceedance Probability (AEP) using the Bushfire Hazard Area – Bushfire Prone Area – Inputs dataset from the Queensland Government data portal.

- **Step 2: Identification of Vegetation Hazard Classes**

Assessment of vegetation communities to identify the relevant vegetation hazard classes (VHCs) using a combination of remnant and pre-clearing regional ecosystem maps, high-resolution aerial imagery and a ground-truthed assessment of vegetation present within the site and within the required 150 m assessment area.

- **Step 3: Slope assessment**

Identification of site slope and effective slope, and determination of whether proposed buildings are upslope or downslope of hazardous vegetation using Bushfire Hazard Area – Bushfire Prone Area – Inputs dataset from the Queensland Government data portal and 1m LiDAR-derived contour data.

- **Step 4: Remodelling of bushfire hazard and calculation of potential fireline intensity** - Where a change to the distribution, extent and/or classification of VHCs within the assessment area is proposed, remodelling of bushfire hazard is undertaken to determine how the changes to VHCs and associated fuel loads affect potential fireline intensity. Potential fireline intensity is to be calculated in accordance with the method outlined in Leonard *et. al.* (2014).

VHCs and associated potential fuel loads are in accordance with Leonard *et al.* (2017), as provided in the BRC Technical Guide and SPP Bushfire APZ width calculator published by the QFES.

Relevant spatial datasets published by the QFES were accessed via the Queensland Spatial Catalogue (QSpatial) and the Catalyst Fire Management System (Queensland Fire and Emergency Services, 2020).

### **3.1.1 Step 1 – Fire Weather Severity**

South-east Queensland has a subtropical climate with warm humid summers and mild winters and is subject to influence from monsoonal climate systems and easterly troughs. Seasonality is not pronounced; however the ‘wet’ season generally occurs during the December – April period. The fire danger season usually occurs from spring to mid-summer (August/September to December) with the greatest danger after a dry winter and spring and when deep, low-pressure systems near Tasmania bring strong, hot and dry westerly winds to the coastal districts (Bureau of Meteorology, 2021). Severe bushfire weather is characterised by days with high temperatures over 35 degrees, low relative humidity and winds from the north to north-west.

The Forest Fire Danger Index (FFDI) provides an annual accumulated index of fire weather severity (i.e. the potential danger of a bushfire) based on a combination of vegetation dryness, air temperature, wind speed and humidity. The relevant FFDI for the site was derived from the Fire Weather Severity (Forest Fire Danger Index) raster provided as part of the Bushfire Hazard Area – Bushfire Prone Area – Inputs dataset.

The FFDI for the site and surrounding land is 54.

### **3.1.2 Step 2 - Vegetation Hazard Classes and Potential Fuel Loads**

#### **3.1.2.1 Vegetation Hazard Classes**

Different types of vegetation communities determine the rate at which dry fuel accumulates. Some vegetation communities protect fuel from drying out in all but extreme bushfire seasons and can then be susceptible to very destructive bushfires. Alternatively, vegetation communities may expose fuels to drying and therefore be frequently available for burning. Frequent bushfires can result in the development of bushfire-tolerant grassy woodlands or grasslands and less destructive bushfire behaviour.

Vegetation Hazard Classes (VHCs) provided within the Bushfire Prone Area – Vegetation hazard class – South east Queensland spatial dataset were reviewed for the site and surrounding land (**Figure 4**). The following VHCs are mapped within the required 150 m assessment area:

- 9.2 Moist to dry Eucalyptus woodland on coastal lowlands and ranges;
- 16.1 Eucalyptus dominated forest on drainage lines and alluvial plains;
- 38.5 Discontinuous irrigated cropping and horticulture;
- 39.2 Low to moderate tree cover in built-up areas;
- 40.4 Continuous low grass or tree cover;
- 41.4 Discontinuous low grass or tree cover; and
- 42.6 Nil to very low vegetation cover.

The reliability of State-mapped VHCs was assessed through:

- review of Vegetation management remnant and pre-clearing regional ecosystem (RE) mapping published by the Department of Resources (DoR); and
- an assessment of existing vegetation undertaken by Green Tape Solutions in January 2024 as part of site investigations to support preparation of a BHA.

DoR's Pre-clear RE mapping shows that small patches of vegetation are mapped within the assessment area. These patches are identified as containing the following REs:

- RE 12.9-10.4 *Eucalyptus racemosa subsp. racemosa woodland on sedimentary rocks*;
- RE 12.3.11 - *Eucalyptus tereticornis +/- Eucalyptus siderophloia, Corymbia intermedia open forest on alluvial plains usually near coast*; and
- RE 12.9-10.12 - *Mixed woodland usually containing Corymbia intermedia, Angophora leiocarpa and at least the presence of Eucalyptus seeana on sedimentary rocks*.

The site assessment determined that vegetation within the 150 m assessment area consists solely of landscape vegetation (including streetscape vegetation) and areas of maintained grassland/lawn with low tree cover. The site itself has been predominantly cleared with only exotic pasture grasses persisting. Previous patches of woodland on the allotment adjacent to the eastern and south western boundaries of the project site have also been cleared following the site inspection in February 2024. Hence vegetation on and adjacent to and within proximity of the development consists of one (1) site-verified community.

- **Vegetation community 1 – Non-remnant grassland**

Vegetation across much of the site and surrounding lots conforms to a weed infested non-native grassland (**Plate 1, Plate 2 and Plate 3**). The previous land use on the site and surrounding lots was for horticulture, however since this use was abandoned, the plots are now overtaken with exotic grasses and weedy shrubs and forbs. Few mature trees are present as paddock trees, along boundaries and landscape vegetation around existing houses and infrastructure. The Ecologically dominant layer (EDL) median height is 1m with a range of 0.1-1.3m.

Grassland vegetation within the 150 m assessment area has been classified as **VHC 41.4** – Discontinuous Low grass or tree cover.

Non-vegetated areas (roads, footpaths and buildings) and very low-threat vegetation (including street trees and maintained lawns, maintained public reserves and parklands and cultivated areas) within the 150 m assessment area have been classified as **VHC 42.6** – Nil to very low vegetation cover. Dams and water source areas have been classified as **VHC 43.6** – Water bodies and very low threat vegetation. These areas have been excluded from the BAL assessment as they meet the criteria for exclusion as low threat vegetation.

**Figure 5** depicts the location of ground-truthed VHCs within the 150 m assessment area.



**Plate 1: Entrance to the property**



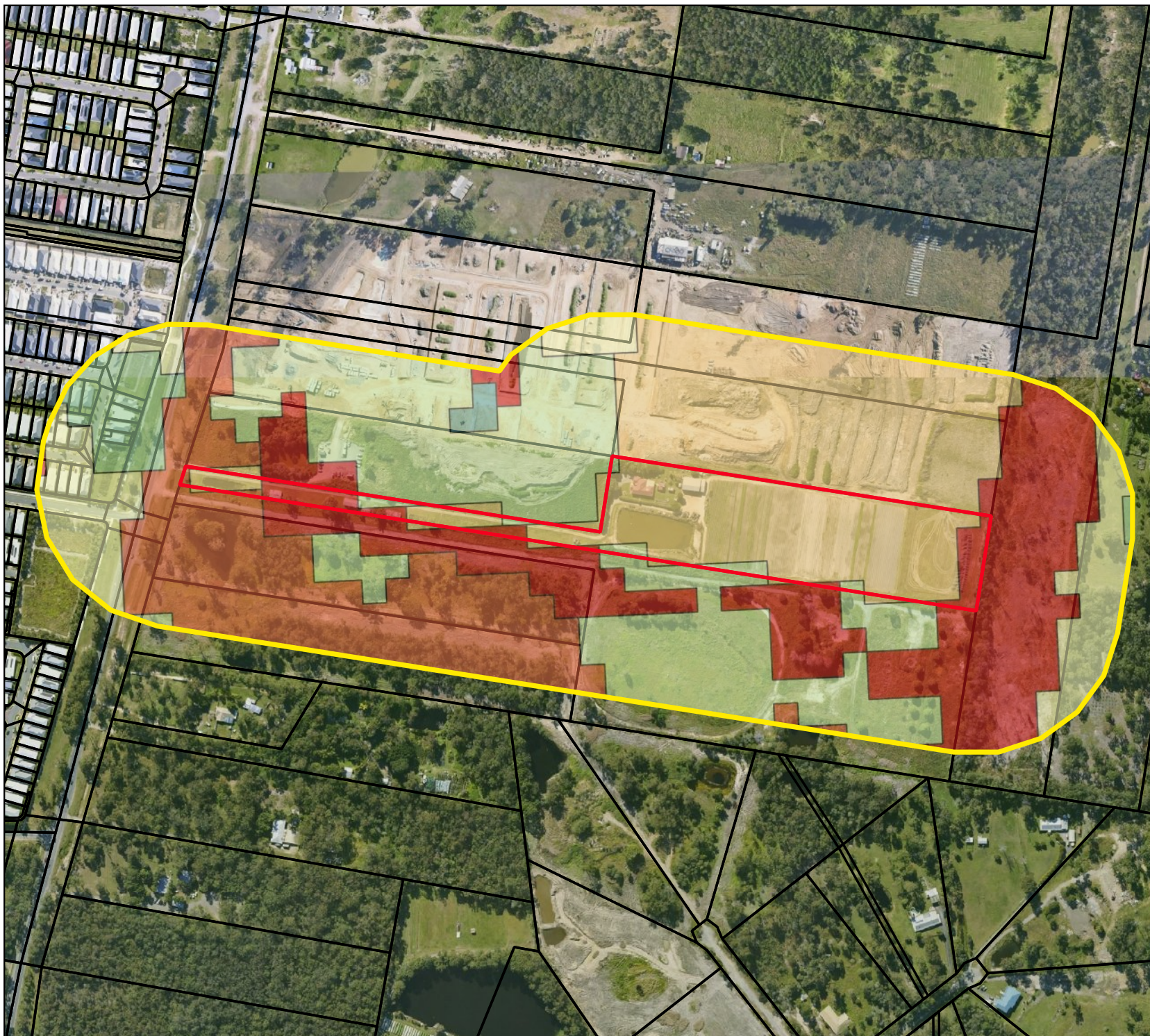
**Plate 2: Existing dam on western portion of development site**



**Plate 3: Vegetation Community 1 – lot to the west of development site**



**Plate 4: Recent drone image (supplied 02/04/2025) showing extent of clearing and the extent of Vegetation Community 1**



## Figure 4: State Mapped Vegetation Hazard Class

Project: PR24010\_560 Chambers Flat Road, Logan Reserve.

- Lot Boundary
- Cadastral Boundaries
- Hazard Assessment Area
- 9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
- 16.1 Eucalyptus dominated forest on drainage lines and alluvial plains
- 38.5 Cropping and horticulture
- 39.2 Low to moderate tree cover in built-up areas
- 40.4 Low grass or tree cover in rural areas
- 41.4 Low grass or tree cover in built-up areas
- 42.6 Nil to very low vegetation cover
- 43.6 Water bodies or very low vegetation cover



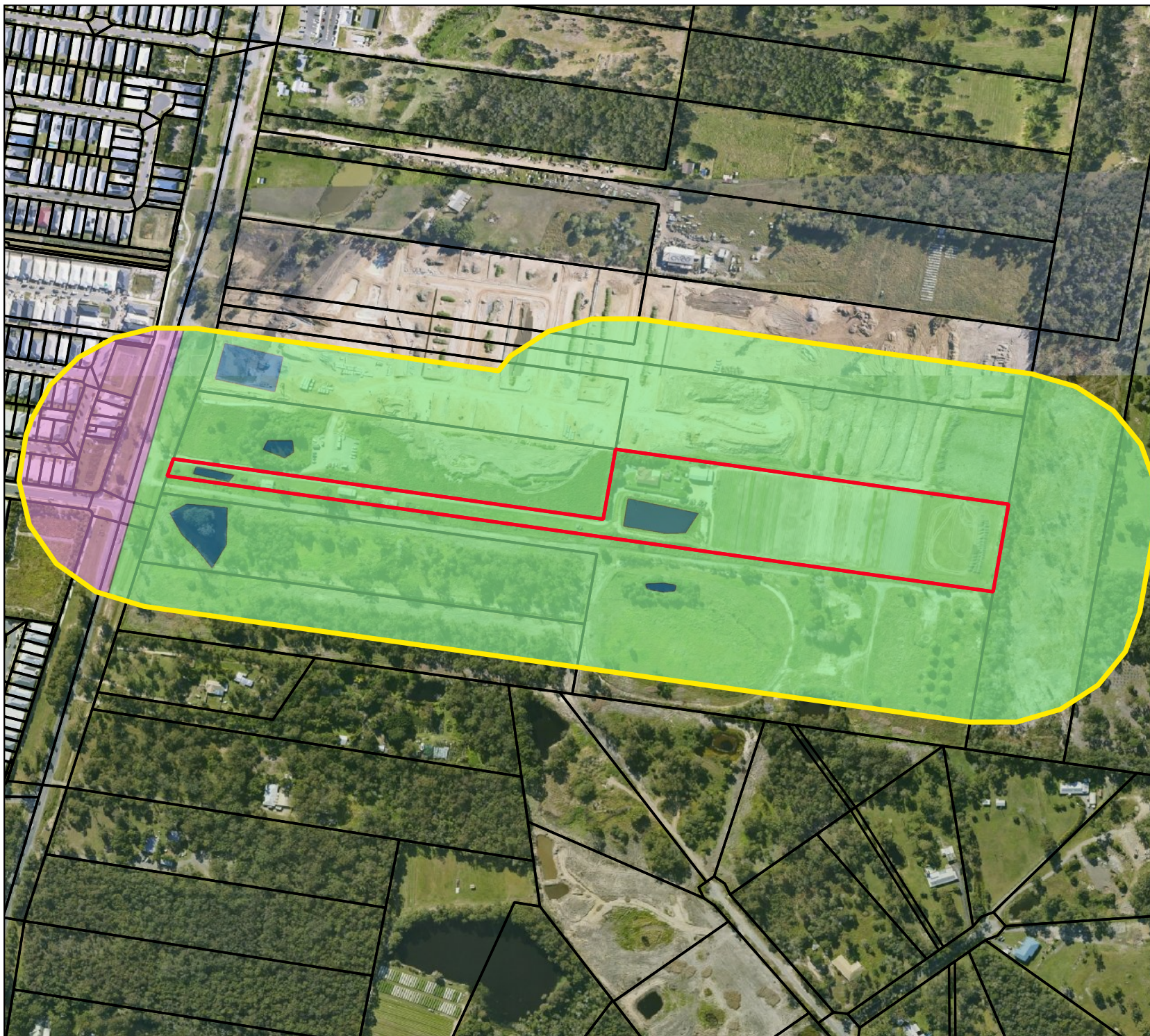
Notes:  
 - Survey Data by Green Tape Solutions  
 - Site Infrastructure and Impact Areas from Client  
 - Base map Copyright (c) MetroMap and its data suppliers.

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## Figure 5: Ground-thruthed Vegetation Hazard Class

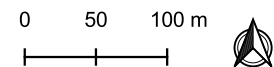
Project: PR24010\_560 Chambers Flat Road, Logan Reserve.

- Lot Boundary
- Cadastral Boundaries
- Hazard Assessment Area
- VHC 41.4 discontinuous low grass or tree cover
- VHC 43.6 water bodies and very low threat vegetation
- VHC 42.6 Nil to very low vegetation cover



Notes:  
 - Survey Data by Green Tape Solutions  
 - Site Infrastructure and Impact Areas from Client  
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### 3.1.2.2 Potential Fuel Loads

Fuel loads have been allocated for each VHC to represent the long-unburnt condition that would be typically exhibited 10 years after fire. In accordance with the values provided in Figure 14 of the BRC Technical Guide (QFES, 2019a), the potential fuel load values for ground-truthed VHCs within and surrounding the site are as provided in **Table 2**.

**Table 2: Potential Fuel Loads for Classified Vegetation within 150 m Assessment Area**

VHC		Total potential surface fuel load (t/ha)	Total overall potential fuel load (t/ha)	Prone type <sup>1</sup>		Fuel continuity <sup>2</sup>	
41.4	Discontinuous low grass or tree cover	2.5	3.0	3	Non-bushfire prone – Grassland fire	2	Discontinuous
42.6	Nil to very low vegetation cover	2.0	2.0	3	Non-bushfire prone – Low hazard	2	Discontinuous
43.6	Water bodies or very low vegetation cover	0	0	3	Non-bushfire prone – Low hazard	2	Discontinuous

In accordance with Section 7.6 of the BRC Technical Guide, fireline intensity, radiant heat flux and BAL is not required to be calculated for non-bushfire prone (i.e., grassland VHCs with a prone type of 2) or low hazard VHCs (i.e., VHCs with a prone-type of 3), therefore VHCs 41.4, 42.6, and 43.6 have been excluded from further assessment.

The assessment has determined that no bushfire-prone vegetation remains within the assessment area. As all vegetation within the assessment area is not classified as bushfire-prone, calculation of radiant heat flux / BAL is not applicable. Given that the site-specific bushfire hazard assessment has confirmed the development area is only subject to a 'low' bushfire hazard, a bushfire management plan is not required to be developed to mitigate the adverse impacts of bushfire.

<sup>1</sup> Prone type taken from the VHC\_Data sheet of the SPP Bushfire APZ Calculator.

<sup>2</sup> Fuel continuity type taken from Figure 14 of the QFES BRC Technical Guide.

## 4 Assessment Against the Bushfire Hazard Overlay Code

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The site is mapped with the Logan Planning Scheme 2015 (Version 9.1) Bushfire Hazard Overlay, which triggers a response to the Bushfire Hazard Overlay Code. An assessment against this code is provided in **Table 3**.

**Table 3: Assessment Against the Logan Planning Scheme 2015 (Version 9.1) Bushfire Hazard Overlay Code**

Performance outcomes	Acceptable outcomes	Comments
<b>For accepted development (subject to requirements) and assessable development</b>		
<b>Location, design and siting of development</b>		
<p><b>PO1</b></p> <p>Development is designed to:</p> <ul style="list-style-type: none"> <li>a. minimise risk of bushfire hazard;</li> <li>b. provide safe premises;</li> <li>c. create efficient emergency access for fire-fighting and other emergency vehicles.</li> </ul> <p><i>Note - Planning scheme policy 6 - Management of bushfire hazard provides guidelines on how to achieve this outcome.</i></p>	<p><b>AO1</b></p> <p>Development:</p> <ul style="list-style-type: none"> <li>a) does not increase the number of persons living in, or lots in, the Bushfire hazard area identified on Bushfire hazard overlay map OM-03.00; or</li> <li>b) is on a site that a bushfire hazard assessment prepared in accordance with the methodology in Planning scheme policy 6 - Management of bushfire hazard determines is of low bushfire hazard.</li> </ul>	<p><b>Complies with PO1</b></p> <p>The entire lot is mapped within the Potential Impact Buffer under the Logan Planning Scheme and the SPP bushfire hazard mapping. The development cannot therefore be located outside of this buffer area. However a Bushfire hazard Assessment prepared in accordance with the methodology in Planning scheme policy 6 identifies that the site is subject to a low bushfire hazard level, and bushfire risk is therefore minimal. Hence residential premises are safe from bushfire, and internal roads and access ways connecting to roads to the north, south, and east provide efficient access for emergency vehicles.</p>
<p><b>PO2</b></p>	<p><b>AO2</b></p> <p>Development is located and constructed:</p>	<p><b>Complies with PO2</b></p> <p>As the site is not bushfire prone, the development siting is such that bushfire hazard</p>

<p>Development is sited and constructed to minimise the bushfire hazard and maximise the protection of life and property from bushfire.</p> <p><i>Editor's note - Planning scheme policy 6 - Management of bushfire hazard contains guidance on the preparation of bushfire management plans.</i></p>	<p>a. where there is no bushfire management plan approved by an existing development approval:</p> <ul style="list-style-type: none"> <li>i. such that the bushfire attack level is less than or equal to BAL-29;</li> <li>ii. away from the most likely direction of a fire front;</li> <li>iii. so that elements of the development least susceptible to fire are sited closest to the bushfire hazard;</li> <li>iv. such that asset protection zones are sited on land with a slope less than 18 degrees;</li> <li>v. such that asset protection zones are entirely within the boundaries of the private property of the development site; or</li> </ul> <p>b. where an approved bushfire management plan directs development to be located.</p> <p><i>Note - BAL = Bushfire attack level is the radiant heat flux a building will experience during a bushfire and is a measure of heat energy impacting on a surface expressed as kW/m<sup>2</sup>. BAL is calculated from the following factors; vegetation type, fuel loads, distance to vegetation, Forest Fire danger Index (FDI), flame length, fire behaviour/intensity and slope. BAL is used to determine the required construction level of a building and the</i></p>	<p>is minimal. Furthermore, the layout of the development is such that egress is safe and efficient in case of emergency and that emergency vehicles have efficient access to all residences.</p>
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	<p><i>size of asset protection zones (inner and outer radiation zones). Further information on calculating the BAL can be obtained from AS3959-2009.</i></p> <p><i>Editor's note - Asset protection zones are not located on slopes greater than 18 degrees to ensure maintenance is practical, soil stability is not compromised and the potential for crown/canopy fires is reduced.</i></p>	
<p><b>PO3</b></p> <p>Reconfiguring a lot ensures that lots are designed to minimise bushfire hazard and provide safe sites for people, property and buildings.</p>	<p><b>AO3</b></p> <p>Lots:</p> <ul style="list-style-type: none"> <li>a. are suitable for people, property and buildings by: <ul style="list-style-type: none"> <li>i. having a bushfire attack level less than or equal to BAL-29; or</li> <li>ii. containing a development envelope area that has a bushfire attack level less than or equal to BAL-29;</li> </ul> </li> <li>b. provide asset protection zones that: <ul style="list-style-type: none"> <li>i. are located on land with a slope less than 18 degrees;</li> <li>ii. are located on the same lot.</li> </ul> </li> </ul>	<p><b>Complies with PO3</b></p> <p>The development is not bushfire prone.</p>

Vehicular access and fire maintenance trails		
<p><b>PO4</b></p> <p>Access for fire management and evacuation is provided by access that:</p> <ul style="list-style-type: none"> <li>a. separates premises from adjoining vegetation;</li> <li>b. is safely accessible by fire fighting vehicles;</li> <li>c. has regular vehicular access points for bushfire management, response and evacuation;</li> <li>d. has regular vehicle passing and turning areas for bushfire management, response and evacuation;</li> <li>e. allows access at all times for fire fighting vehicles;</li> <li>f. allows for maintenance, burning off and bushfire response;</li> <li>g. has vehicular links to an alternative through road;</li> <li>h. is readily maintained.</li> </ul> <p><i>Editor's note - Planning scheme policy 6 - Management of bushfire hazard provides details on alternative solutions for providing fire management access and evacuation</i></p>	<p><b>AO4</b></p> <p>Access for fire management and evacuation is provided by vehicular access in the form of a perimeter road:</p> <ul style="list-style-type: none"> <li>a. with a minimum reserve width of 20 metres;</li> <li>b. located between the premises and adjoining vegetation;</li> <li>c. with a maximum gradient of 12.5 percent;</li> <li>d. constructed to otherwise comply with section 3.4 - Movement infrastructure standards of Planning scheme policy 5 - Infrastructure;</li> <li>e. that has a layout that does not include a cul-de-sac.</li> </ul>	<p><b>Complies with PO4</b></p> <p>Access to lots on the site will be provided via new internal streets and roads connecting to adjacent lots to the north, south and east.</p> <p>These roads separate most of the blocks from adjoining (low hazard) vegetation and will be safely accessible by fire fighting vehicles which will enable access at all times and burning off for bushfire preparation and response.</p>

Water supply		
<p><b>PO5</b></p> <p>Development has access to adequate water supply for fire fighting purposes.</p>	<p><b>AO5</b></p> <p>Development:</p> <ul style="list-style-type: none"> <li>a. is connected to a reticulated water supply scheme that has sufficient flow and pressure characteristics for fire fighting purposes at all times with a minimum pressure and flow of 10 litres per second at 200kPa; or</li> <li>b. has an on-site water storage in accordance with Table 8.2.3.3.2 - Water storage for fire fighting, dedicated or retained for fire fighting purposes that is made of fire resistant materials and is:               <ul style="list-style-type: none"> <li>i. a separate tank; or</li> <li>ii. a reserve section in the bottom part of the main water supply tank.</li> </ul> </li> </ul> <p><i>Editor's note - The requirement in AO5 is:</i></p> <p><i>- in addition to the requirement for potable water supply/storage in AO2 in Table 9.4.3.3.1 - Infrastructure code: accepted development (subject to requirements) and assessable development;</i></p> <p><i>- reflected in AO5 in Table 9.4.3.3.1 - Infrastructure code: accepted development (subject to requirements) and assessable development.</i></p>	<p><b>Complies with PO5.</b></p> <p>The development has access to the City of Logan reticulated water supply. This water supply complies with the minimum pressure and flow of 10 litres per second at 200kPa.</p>

For assessable development		
Community infrastructure		
<p><b>PO6</b></p> <p>Community infrastructure is not located in a bushfire hazard area or is able to function effectively during and immediately after a bushfire event.</p>	<p><b>AO6</b></p> <p>Community infrastructure is:</p> <ul style="list-style-type: none"> <li>a. not located in a Bushfire hazard area identified on Bushfire hazard overlay map OM-03.00; or</li> <li>b. located to ensure that: <ul style="list-style-type: none"> <li>i. the core services provided by the community infrastructure is able to function effectively during bushfire events;</li> <li>ii. access to the community infrastructure is not compromised by bushfire events;</li> <li>iii. the safe storage of valuable records, public records and items of cultural or historic significance is able to be maintained during a bushfire event.</li> </ul> </li> </ul>	<p><b>Not Applicable</b></p> <p>Development is not Community Infrastructure</p>

Hazardous materials		
<p><b>PO7</b></p> <p>Public safety and the environment are not adversely affected by the adverse impacts of bushfire on hazardous materials including fuels, explosives and flammable chemicals manufactured or stored in bulk on premises.</p>	<p><b>A07</b></p> <p>Hazardous materials:</p> <ul style="list-style-type: none"> <li>a. storage is in compliance with AS1940 - The storage and handling of flammable and combustible liquids;</li> <li>b. manufacturing does not occur in a Bushfire hazard area on Bushfire hazard overlay map OM-03.00.</li> </ul>	<p><b>Complies with PO7</b></p> <p>Development is for residential use and hazardous materials will not be stored on site in quantities beyond typical residential use, in compliance with the Logan Planning scheme requirements for hazardous material storage and AS1940.</p>

## 5 Conclusion

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This report has been prepared to provide a site-specific Bushfire Hazard Assessment for a proposed residential subdivision development at 560 Chambers Flat Road, Logan Reserve. The bushfire assessment has been undertaken in accordance with a contemporary methodology i.e. the methodology outlined in the *QFES BRC Technical Reference Guide* (QFES, 2019) and utilises QFES-published inputs (FFDI and fuel loads) for hazardous vegetation classified in accordance with the QFES vegetation hazard classification system.

The results of the assessment show that vegetation within 150 m of the development site is not classified as bushfire-prone and therefore, calculation of radiant heat flux/BAL is not applicable. The development site is subject to 'low' bushfire hazard and thus a bushfire management plan is not required.

AO1 b) of the Logan Planning Scheme 2015 specifies that development is on a site that a bushfire hazard assessment prepared in accordance with the methodology in *Planning scheme policy 6 - Management of bushfire hazard* determines is of low bushfire hazard. This assessment demonstrates that this outcome is achieved.

Access to future lots on the site will be provided via new internal streets and roads connecting to adjacent lots to the north, east and west. These roads will allow for access and egress of residents and emergency vehicles during bushfire emergencies.

The proposed development complies with *State Planning Policy 2017* Natural Hazards, Risk and Resilience Assessment Benchmarks and the *Logan Planning Scheme 2015* Bushfire Hazard Overlay Code.

## 6 References

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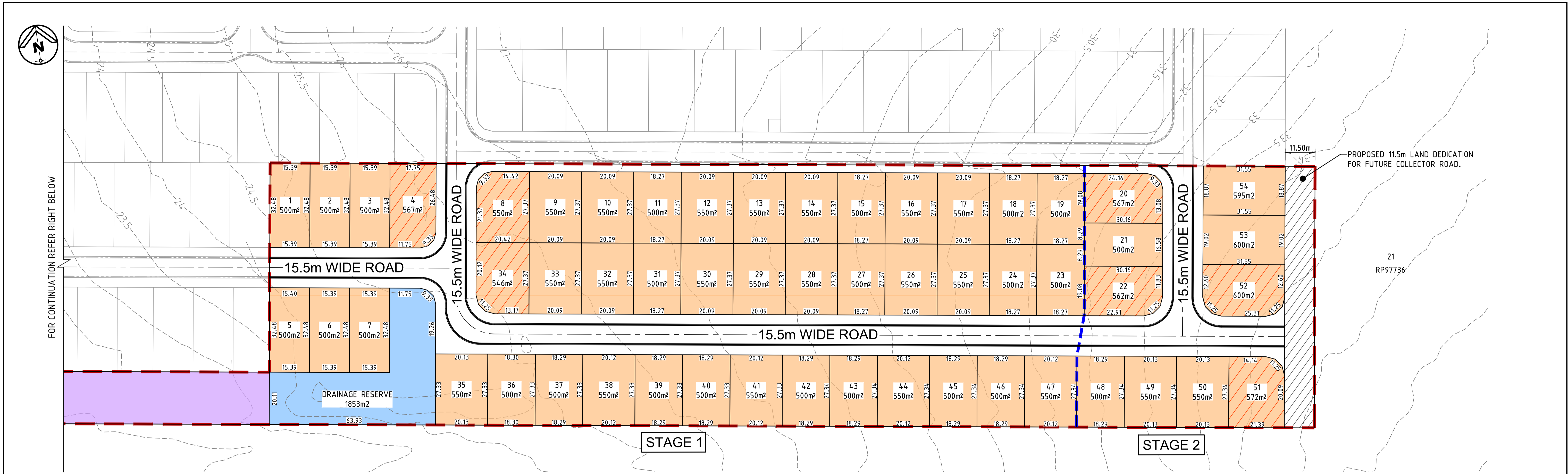
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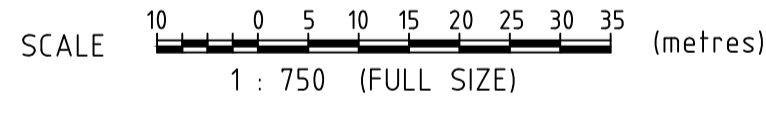
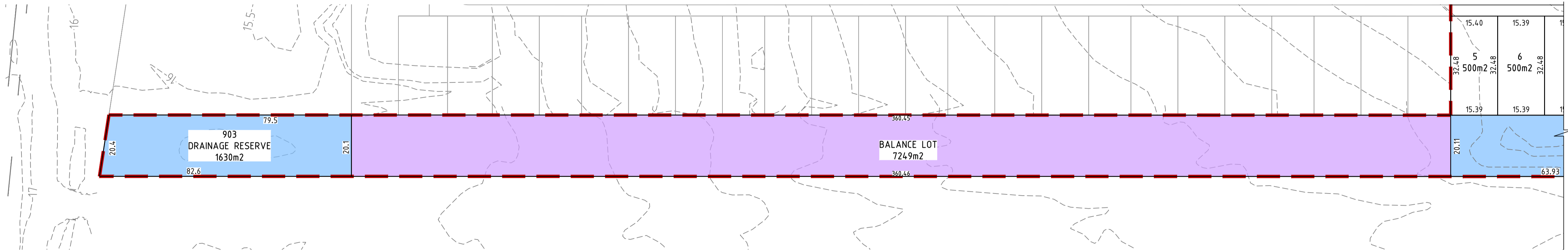
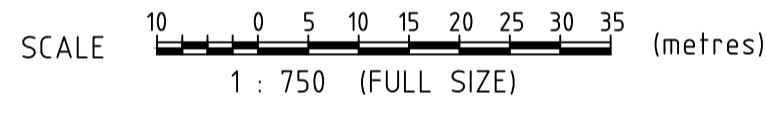
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## Appendix 1

# Proposed Development Layout



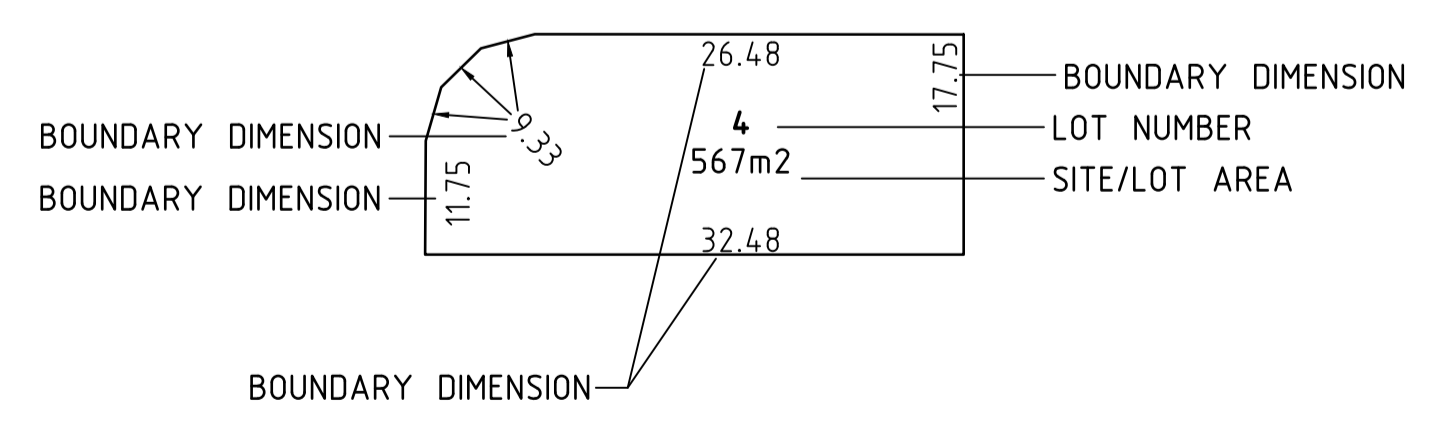
**MASTER PLAN VILLAGE PRECINCT**



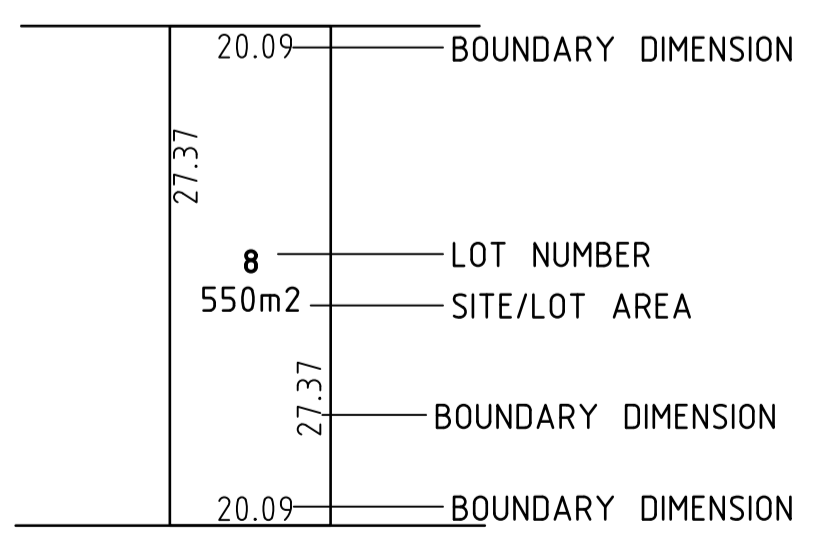
**DEVELOPMENT SUMMARY**

TOTAL SITE AREA:	4.934 ha
TOTAL AREA OF NEW ROAD:	0.873 ha
LENGTH OF NEW ROAD:	469.61 metres
TOTAL AREA ROAD PAVEMENT:	0.370 ha
TOTAL AREA BALANCE LOT :	0.725 ha
TOTAL AREA OF DRAINAGE RESERVE :	0.348 ha
NET DEVELOPMENT AREA :	2.871 ha
NET SITE AREA DENSITY:	18.81 DWELLINGS/ha
GROSS SITE DENSITY:	10.94 DWELLINGS/ha

**CORNER ALLOTMENT**



**STANDARD ALLOTMENT**



**LEGEND**

- TYPICAL ALLOTMENTS
- CORNER ALLOTMENTS
- DEVELOPMENT BOUNDARY
- STAGE BOUNDARY

**LOT FRONTAGE WIDTH BREAKDOWN**

FRONTAGE WIDTH	No. ON LOTS
15.00-17.99m	13
≥18m	41
<b>TOTAL</b>	<b>54</b>

**YIELD BREAKDOWN**

LOT SIZE	No. ON LOTS
500-549m2	24
550-599m2	28
≥600m2	2
<b>TOTAL</b>	<b>54</b>

PRELIMINARY

CHAMBERS FLAT ROAD LOGAN RESERVE  
LOT 4 RP97736; 560 CHAMBERS FLAT ROAD  
FOR  
**GDM**  
PROPERTY  
**A1** ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
G	LAYOUT AMENDED	27.03.25
F	LAYOUT AMENDED	27.02.25
E	LAYOUT AMENDED	24.02.25
D	LAYOUT AMENDED	13.11.24
C	LAYOUT AMENDED	24.08.24
B	LAYOUT AMENDED	22.03.24
A	ISSUE FOR INFORMATION	19.01.24

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ABN 76 166 942 365

PROJECT:  
**560 CHAMBER FLAT ROAD**  
**PRELIMINARY CIVIL**  
**ENGINEERING DESIGN**

DRAWING TITLE :  
**MASTER PLAN**  
**VILLAGE PRECINCT**

DEVEL. APPLIC. No.:	DATE : 27.03.2025
PROJECT LEADER : FRASER LUCAS	DESIGNER : TG
DRAFTSPERSON : TN	CHECKED : FRASER LUCAS
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
RPEQ:	
SCALE :	DATUM : AHD
PROJECT No.:	FULL SIZE : A1
BE230588	DRAWING No.:
SK01	VERSION:
	G