

# **Bushfire Assessment**

In relation to

**Hillview Hard Rock Quarry**

**Various Lots**

**67 Maytoms Lane, Booral**

**Prepared for:**

**Coastwide Materials Pty Ltd**

**June 2024**

**Project: 22437**

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## 1. INTRODUCTION

This Bushfire Assessment has been prepared in relation to the proposed Hillview Hard Rock Quarry project on land at 67 Maytoms Lane, Booral.

A site locality map is at Figure 2.1.

The land within the site and surrounds is mapped as bushfire prone land for the purposes of Section 10.3 of the *Environmental Planning & Assessment Act 1979* (EP&A Act).

Secretary's Environmental Assessment Requirements (SEARs) were issued for the project (Application Number SSD-70557215) on 3 June 2024.

The assessment of potential bushfire risk is included in the item number 10 of the key Issues listed in the SEARs, under the general heading "*Hazards*".

This assessment is limited to consideration of potential bushfire risk and will form part of an Environmental Impact Statement (EIS) for the proposal.

The proposal is not listed as development for a Special Fire Protection Purpose (SFPP) under either s100B of the *Rural Fires Act 1997* or Clause 47 of the *Rural Fires Regulation 2022*.

The purpose of this report is to carry out a bushfire assessment having regard to the provisions of the NSW Rural Fire Service guideline entitled *Planning for Bush Fire Protection 2019* (PBP).

The proposal is for "other development" for the purposes of Chapter 8 of PBP.

It is likely that the management and use of the site will be subject to a separate Bushfire Management Plan (BMP) to be prepared after any consent is granted for the proposal and implemented prior to commencement of the proposed use.

It is possible that conditions of any consent may guide the content of any BMP and it is appropriate that any BMP be formulated once any conditions of consent are known.



## **2. SITE LOCATION & CONTEXT**

The subject site comprises land within Lot 60 DP 1094397, Lot 1 DP 159902, Lot 62 DP 95029, Lot 63 DP 95029, Lot 2 DP 1166923, Lot 3 DP 1166923, Lot 4 DP 1166923, and Lot 64 DP 95030 with a combined area of about 400 hectares.

The site is shown in Figure 2.1.

Access to the site is via Maytoms Lane approximately 1.8 kilometres (kms) west of the intersection with The Bucketts Way, and approximately 4 kms south-west of the township of Booral.

The subject site has a history of agricultural activities and, as such, substantial areas of the site are largely cleared of vegetation.

Land surrounding the subject site to the north, south, east and west consists of heavily vegetated, steeply sloping rural land holdings.

The land within the site is mapped as bushfire prone land.

Parts of the site are identified on the Biodiversity Values Map and generally correspond to the course of Double Creek, which travels south through the site.



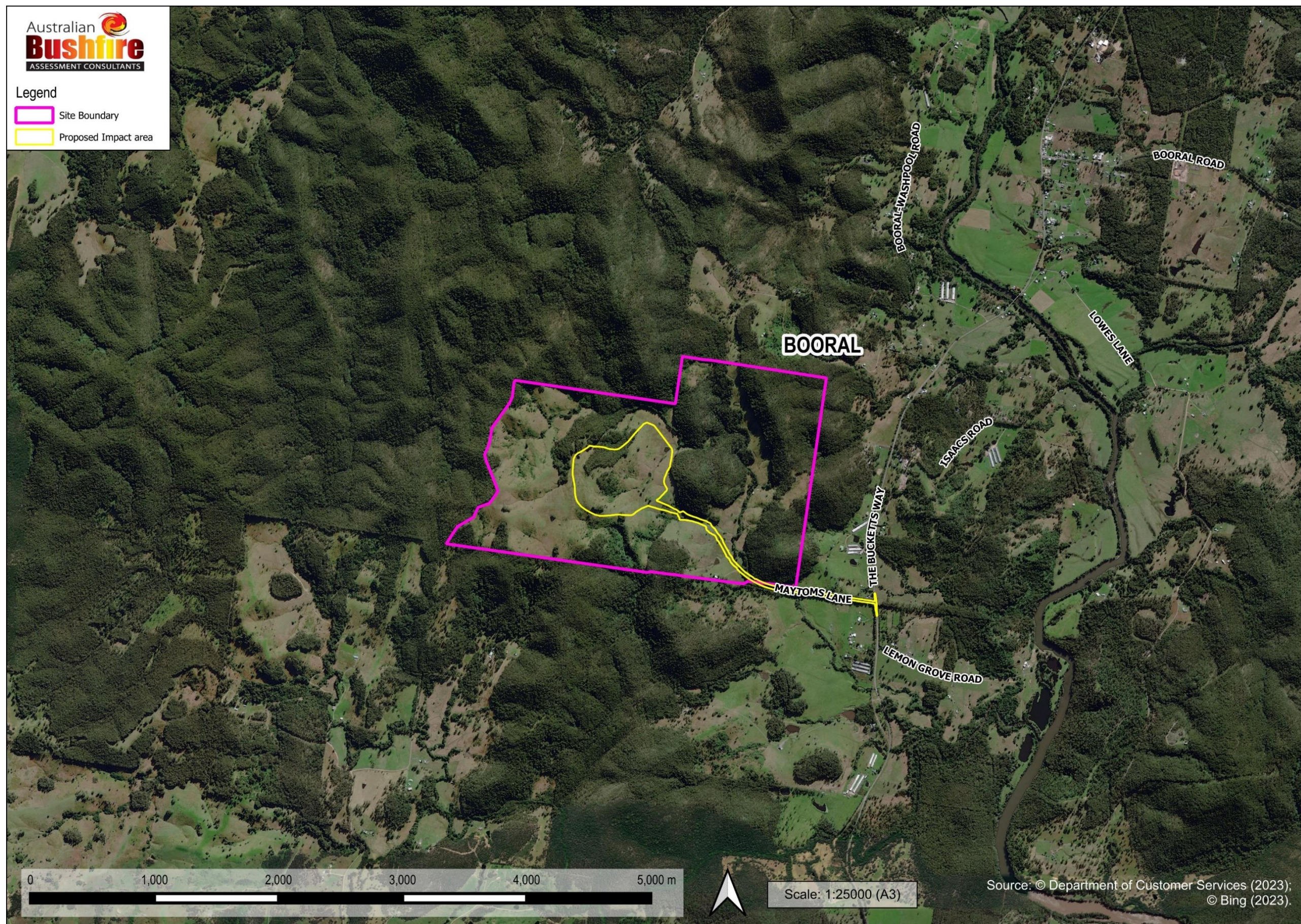


Figure 2.1: Site Locality



### 3. SUMMARY OF KEY TECHNICAL ISSUES

For simplicity, the following provides an outline of the main considerations for the project in relation to potential bushfire risk:

- The proposal is consistent with the aim and objectives of the NSW Rural Fire Service guideline entitled *Planning for Bush Fire Protection 2019* (PBP).
- The main assets on the site are the office building (assumed to be a Class 5 building for the purposes of the National Construction Code/Building Code of Australia) and the weighbridge. The office and weighbridge are each greater than 100 metres from any sclerophyllous potential bushfire hazard vegetation, with the main potential bushfire hazard vegetation around the office being grassland.
- The area around the proposed office building and weighbridge, assuming that land within a radius of not less than 50 metres around the structures is established and maintained as an Asset Protection Zone (APZ), results in those structures being subject to BAL-LOW for the purposes of AS3959-2018 *Construction of buildings in bushfire-prone areas*.

### 4. BUSHFIRE PRONE LAND MAPPING

Bushfire prone land (BFPL) is land that has been identified by Mid-Coast Council as land which can support a bushfire or is potentially subject to bushfire attack.

In relation to bushfire prone land, it is noted that the EP&A Act identifies bushfire prone land as being land recorded as such on a relevant map certified under section 10.3(2) of the Act.

In terms of the land proposed for the development, Figure 4.1 shows the land around the impact area which is recorded/mapped as bushfire prone land.



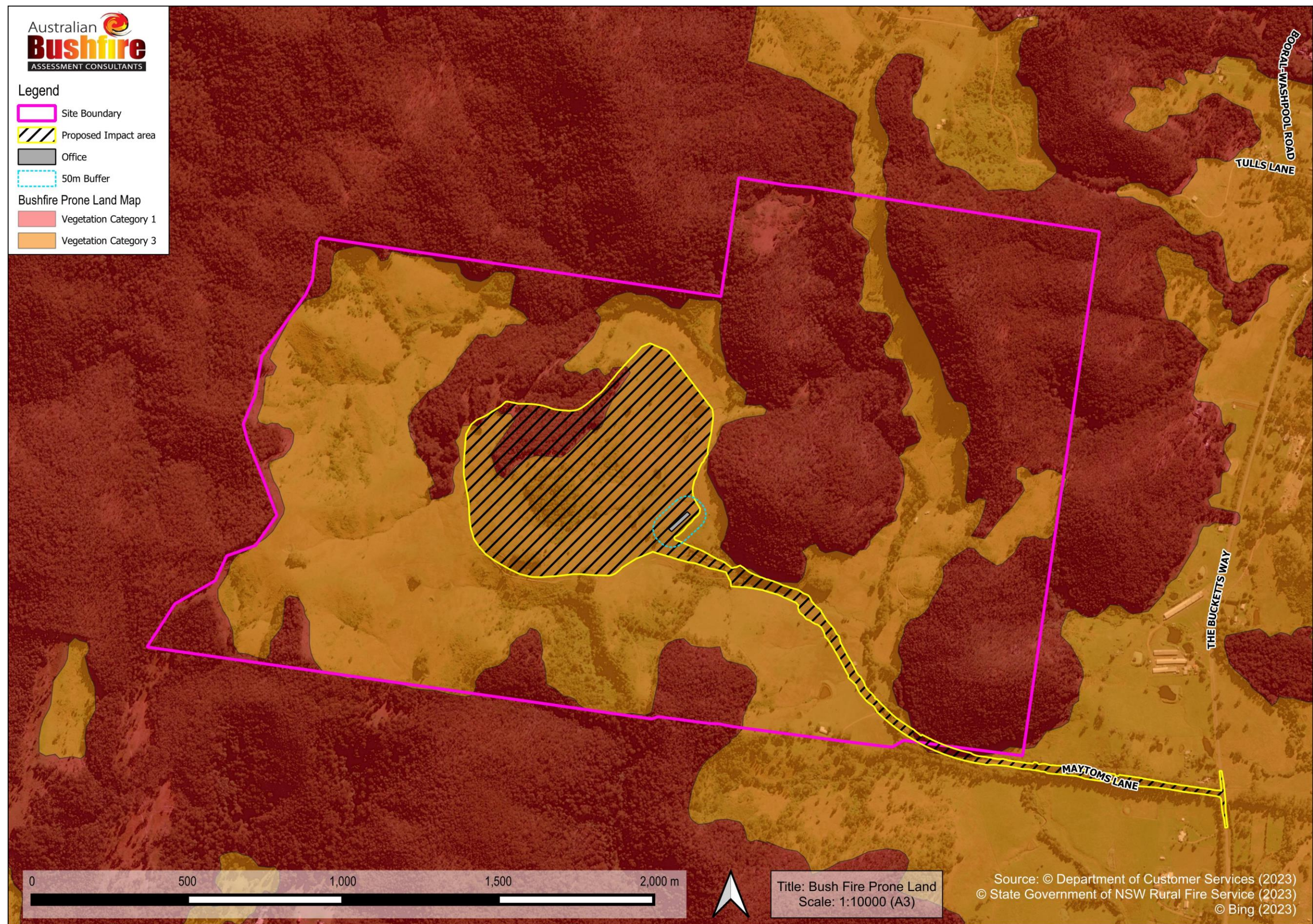


Figure 4.1: Site Locality and Bushfire Prone Land Map



## 5. THE PROPOSAL

In summary, the proposed development involves:

- establishing a hard rock quarry to extract and process up to 1.5 million tonnes of hard rock (predominantly Rhyolite) per annum for up to 30 years;
- constructing associated site infrastructure and amenities; and
- transporting material off site via public roads.

While the area of the subject site is approximately 400 hectares, the quarry footprint will be approximately 48 hectares, including the access road via Maytoms Lane.

During the initial years of operation, site establishment works/processes will be completed prior to the main extraction activities commencing.

These establishment works will include:

- new intersection at The Bucketts Way and Maytoms Lane;
- construction of the main access to the processing pad;
- creation of the processing pad; and
- installation of other infrastructure including site offices and facilities, weighbridges and processing machinery.

The proposal will involve an access road from The Bucketts Way via Maytoms Lane through the site to the processing pad.

Upgrades to the intersection at Maytoms Lane and The Bucketts Way will comprise construction of a short deceleration lane for vehicles travelling south along The Bucketts Way turning right into the site, and construction of a standard right turn out of the site.

Road construction and/or upgrades to Maytoms Lane are proposed to cater for vehicle movements to and from the site and quarry.

The road in Maytoms Lane, continued as an access road into the site, will be constructed/upgraded to achieve a 14.0 metre wide road with a 2.0 metre verge either side (all sealed).

The development is to be carried out over seven (7) stages as shown in Figure 5.1 to Figure 5.7, as follows:

- Stage 1 disturbance area: approximately 9.5 hectares;
- Stage 2 disturbance area: approximately 2.4 hectares;
- Stage 3 disturbance area: approximately 10.6 hectares;
- Stage 4 disturbance area: approximately 1.1 hectares;
- Stage 5 disturbance area: approximately 5.4 hectares;
- Stage 6 disturbance area: approximately 9.6 hectares; and
- Stage 7 disturbance area: approximately 9.4 hectares.

Various items of ancillary infrastructure will be installed and operated to support the quarry, including:

- Two (2) weighbridges;
- Crushing and screening plan for processing extracted hard rock material;
- Pugmill and pre-coat plant for road base products;
- Workshop;
- Site office and amenities;
- Parking areas; and
- Product storage areas.

Water supply is to be obtained via capture and reuse of runoff on site.

No reticulated power supply is proposed to be extended to the processing pad and office/amenities. Power is to be provided by diesel generators.





Figure 5.1: Proposed Site Layout (Stage 1)





Figure 5.2: Proposed Site Layout (Stage 2)



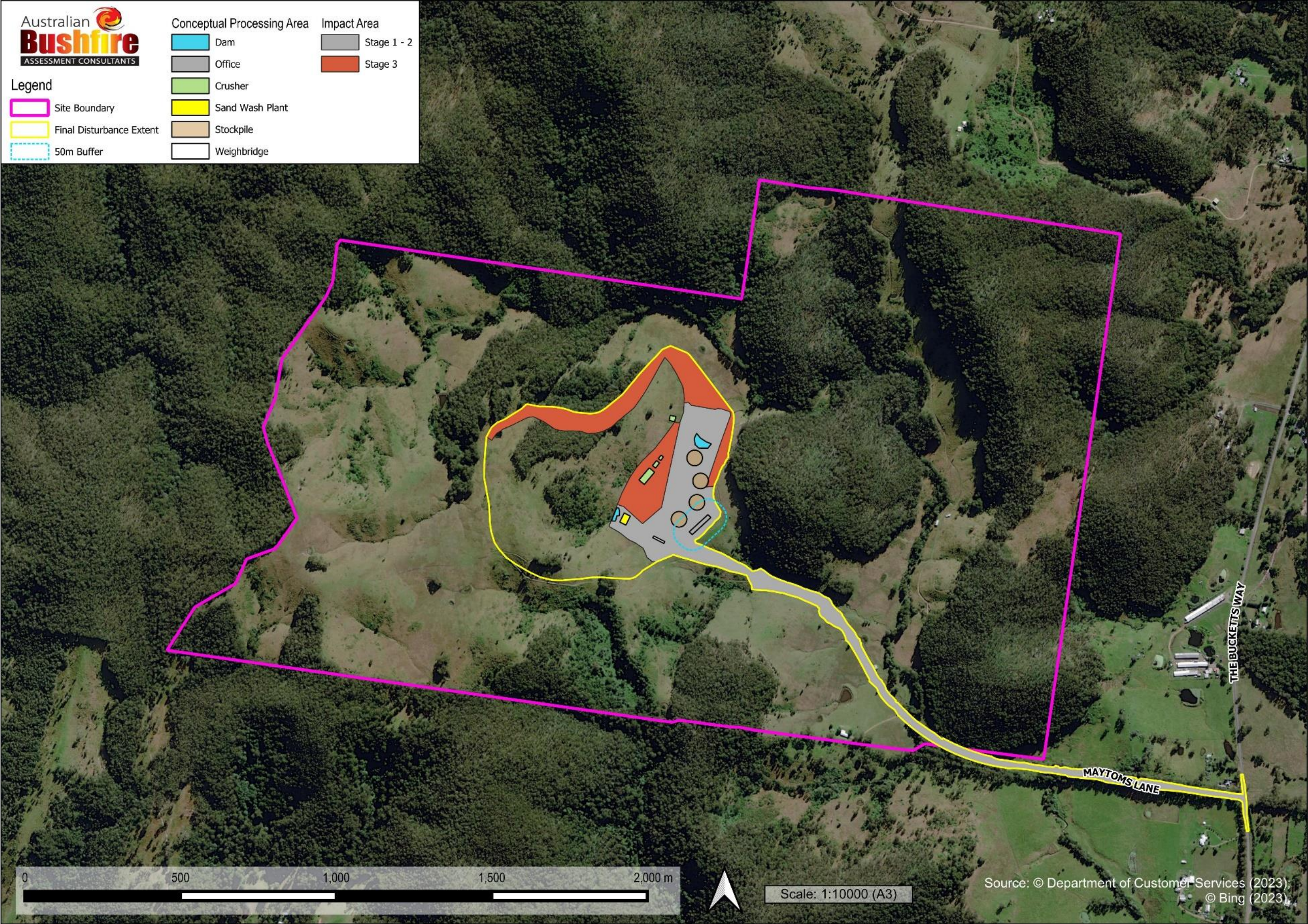


Figure 5.3: Proposed Site Layout (Stage 3)



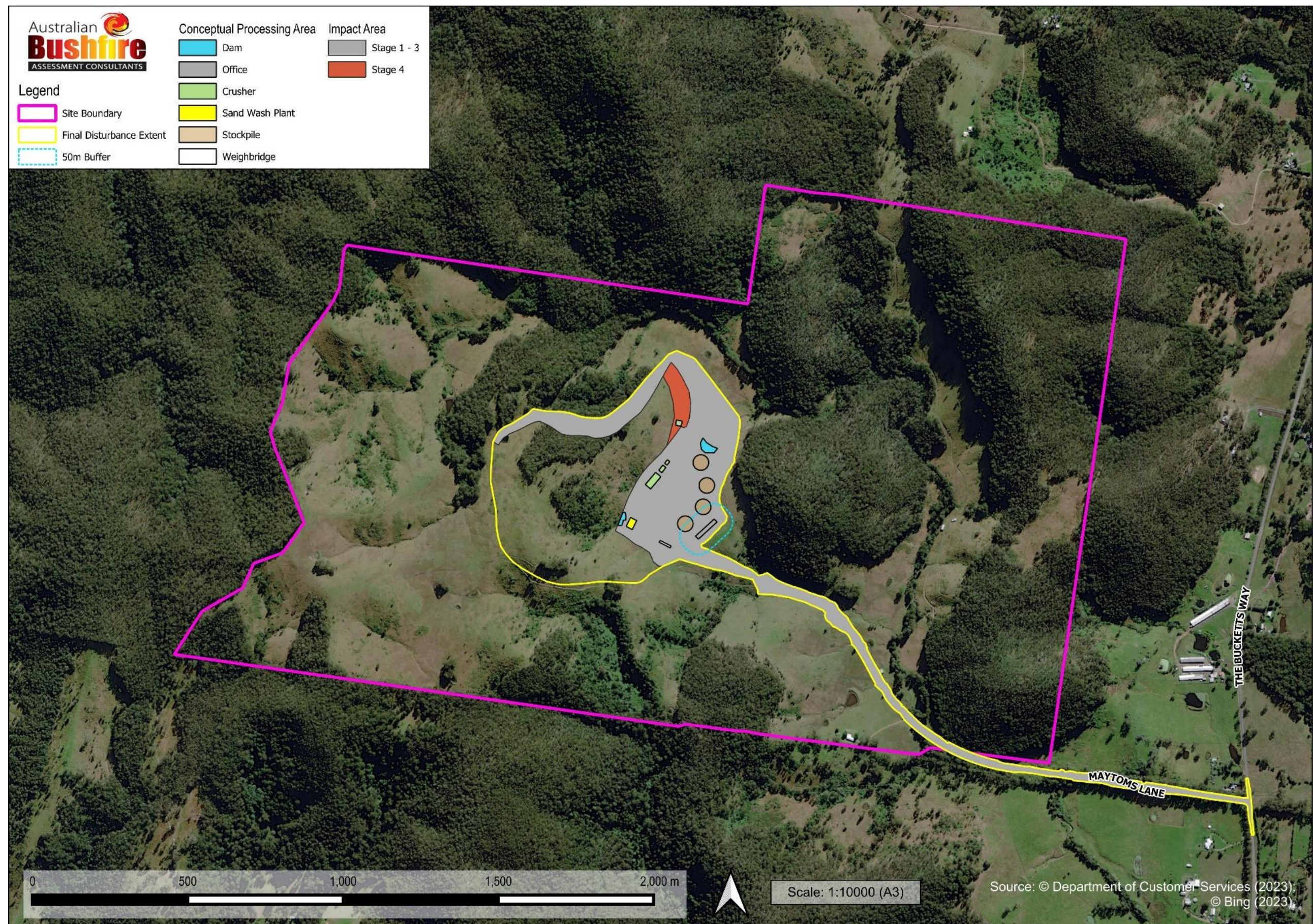


Figure 5.4: Proposed Site Layout (Stage 4)



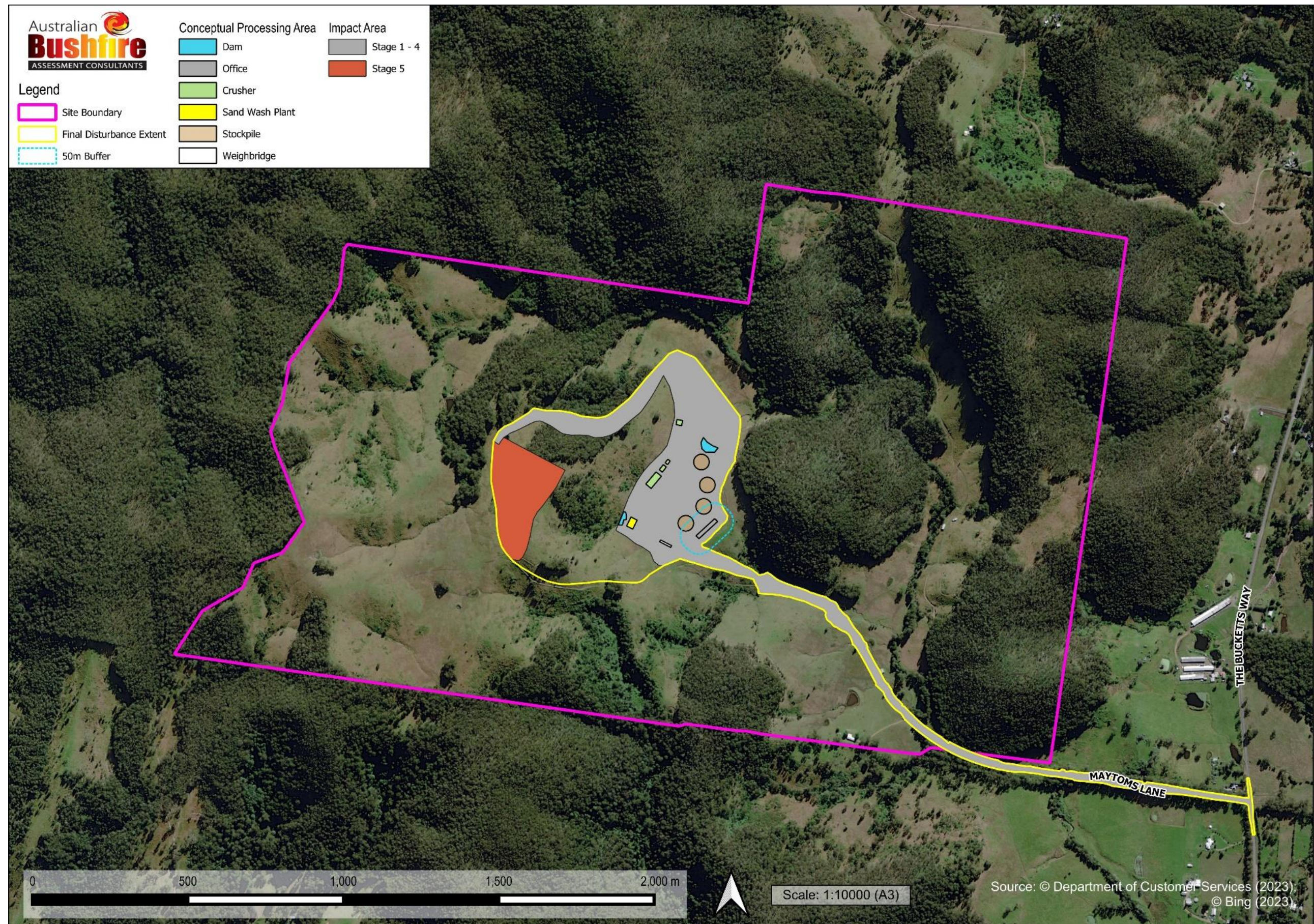


Figure 5.5: Proposed Site Layout (Stage 5)



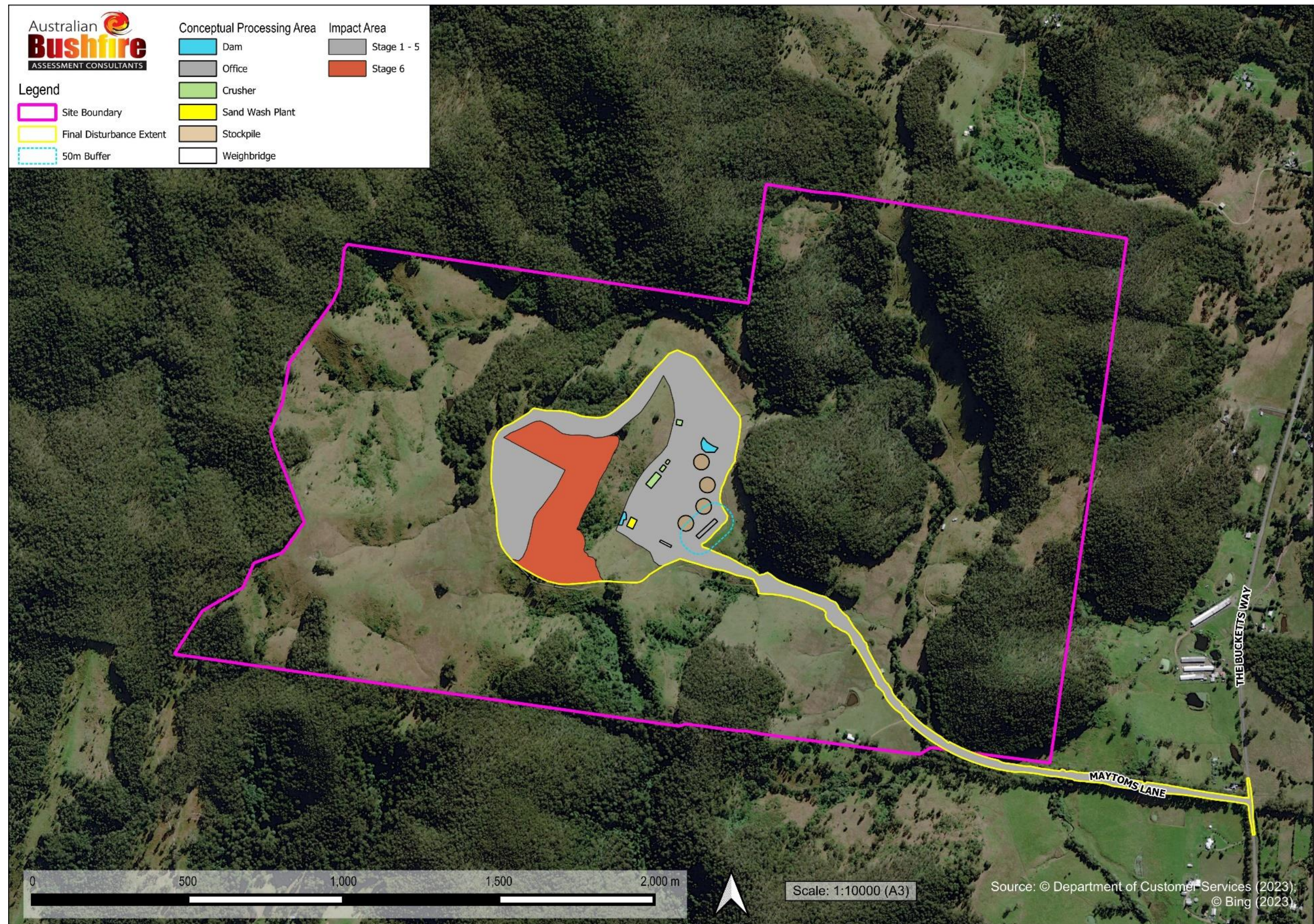


Figure 5.6: Proposed Site Layout (Stage 6)



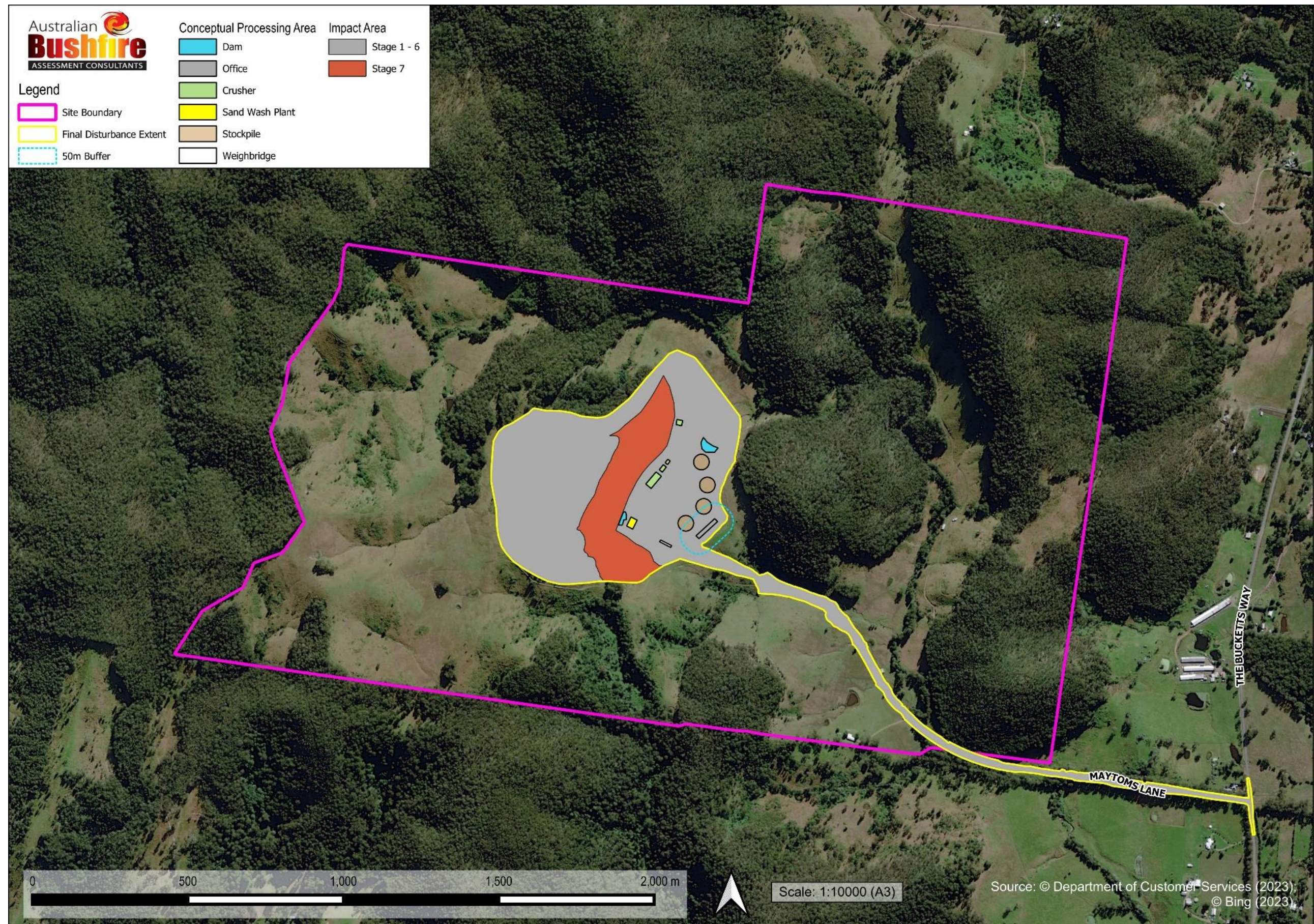


Figure 5.7: Proposed Site Layout (Stage 7)



## **6. SITE ASSESSMENT METHODOLOGY**

The methodology used in this assessment is in accordance with the RFS Guideline *Planning for Bush Fire Protection 2019* and is outlined in the following sections.

### **6.1 Assessment of Vegetation**

As noted in Section 4, the mapped bushfire prone land is shown as areas of Category 1 and Category 3 potential bushfire hazard vegetation.

The vegetation formations around the impact area are shown in Figure 6.1.

Figure 6.1 indicates that the main potential bushfire hazard vegetation in relation to the proposed impact area is *grassland*. The grassland vegetation generally aligns with those parts of the land mapped as Category 3 potential bushfire hazard vegetation.

There are areas of *forest* vegetation located on the land, in and around the impact area. The forest vegetation generally aligns with those parts of the land mapped as Category 1 potential bushfire hazard vegetation.

In relation to areas of forest vegetation within the impact area, these areas will be progressively removed as the proposed development advances through the stages shown at Figure 5.1 to Figure 5.7.

Any areas of vegetation outside the impact area will be retained.

### **6.2 Assessment of Slope**

For the purposes of Section A1.4 of PBP, the effective slope of land under potential bushfire hazard vegetation is highly variable throughout the site and impact area. This is illustrated in Figure 6.2.

The slope in relation to various parts of the impact area is shown diagrammatically in Figure 6.3.



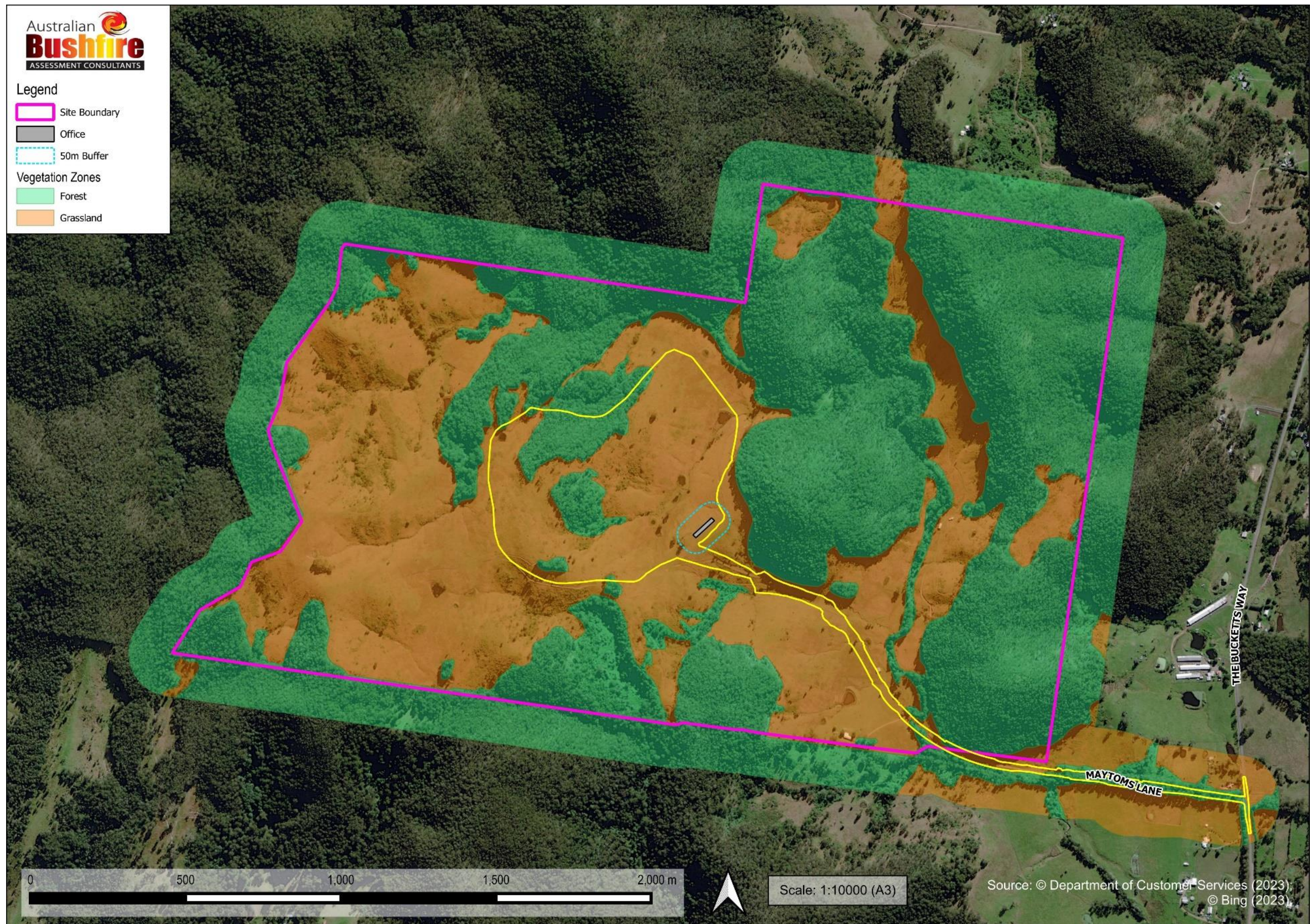


Figure 6.1: Vegetation map



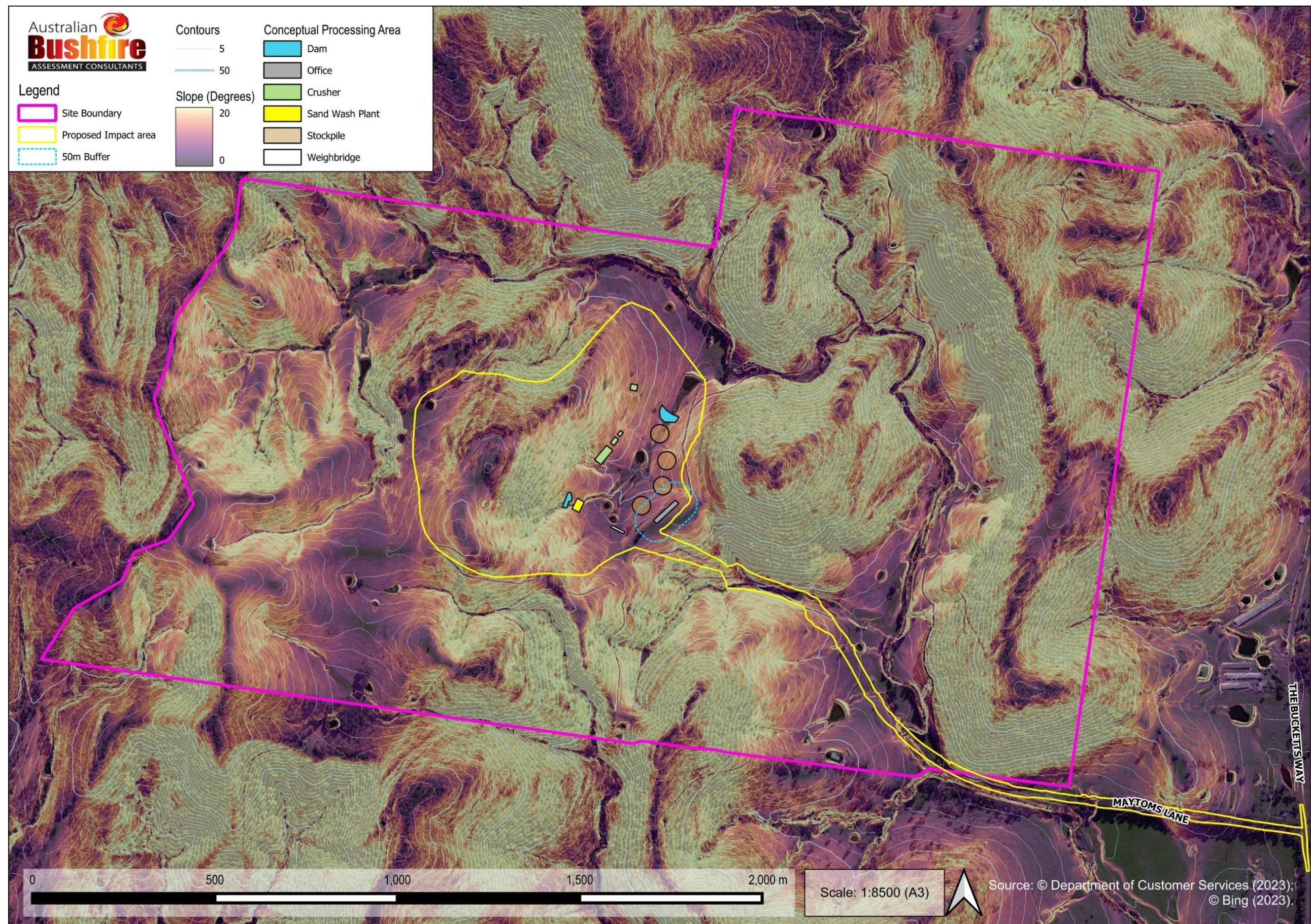


Figure 6.2: Slope



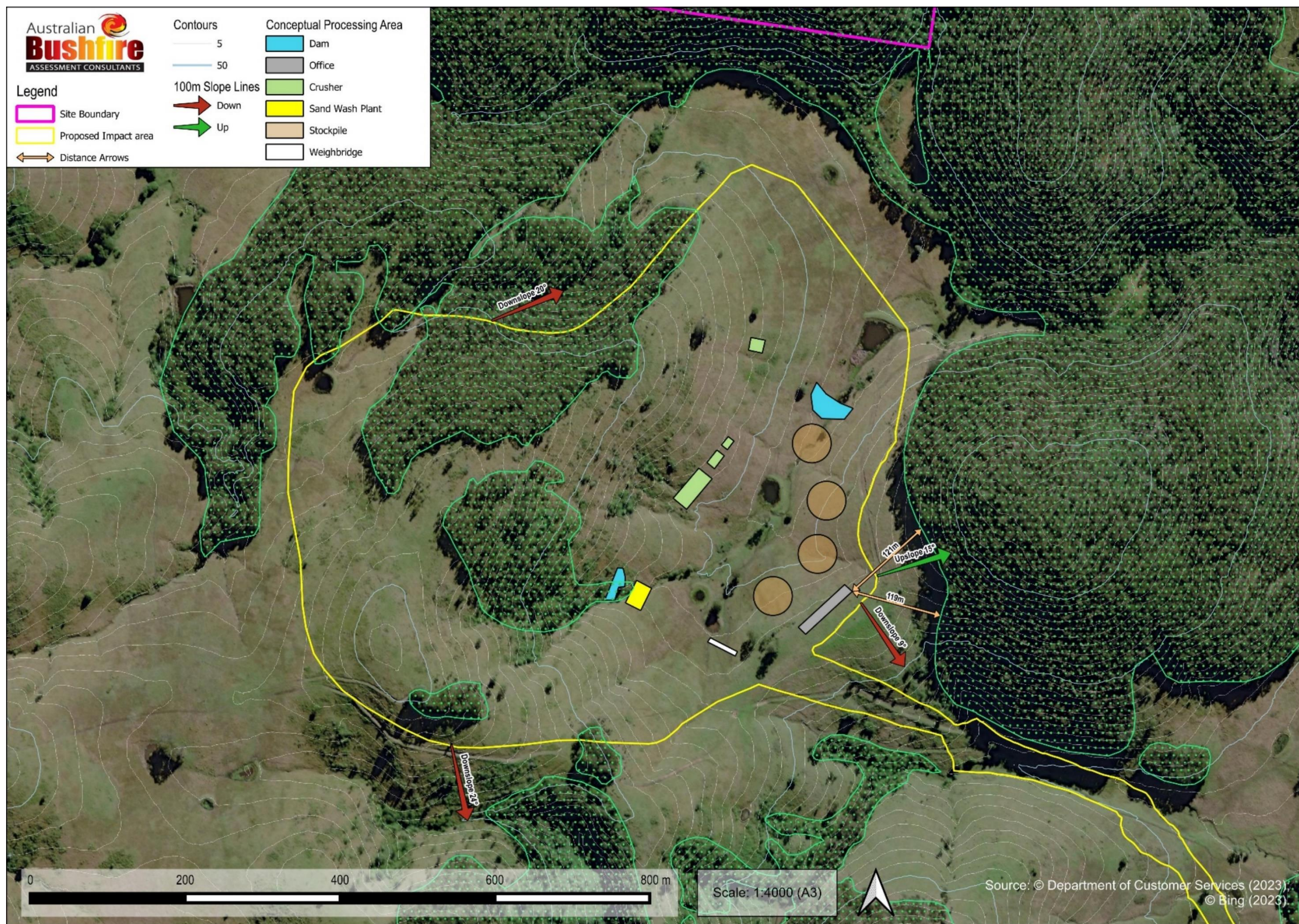


Figure 6.3: Slope and distance to various parts of the impact area



## **7. CHAPTER 8 OF PLANNING FOR BUSH FIRE PROTECTION 2019**

According to Part 8.1 of *Planning for Bush Fire Protection 2019* (PBP), “other development” is to:

- (i) *satisfy the aim and objectives of PBP (outlined in Chapter 1 of PBP);*
- (ii) *consider any issues listed for the specific purpose for the development (set out in Chapter 8 of PBP); and*
- (iii) *propose an appropriate combination of bush fire protection measures (BPMs).*

### **7.1 Aim & Objectives of PBP**

The aim of *Planning for Bush Fire Protection 2019* (PBP) is:

*to provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment.*

The objectives of PBP are to:

- i. afford buildings and their occupants protection from exposure to a bush fire;*
- ii. provide for a defensible space to be located around buildings;*
- iii. provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;*
- iv. ensure that appropriate operational access and egress for emergency service personnel and occupants is available;*
- v. provide for ongoing management and maintenance of BPMs; and*
- vi. ensure that utility services are adequate to meet the needs of firefighters.*

Table 7.1.1 sets out an assessment of the proposal in relation to the objectives of PBP. The assessment at Table 7.1.1 demonstrates that the proposal is consistent with the objectives, thus satisfying the aim of PBP.

Table 7.1.1		
Objective		Comment
i	<i>afford buildings and their occupants protection from exposure to a bush fire</i>	<p>The predominant vegetation formation around the proposed impact area is grassland vegetation and the office and weighbridge structures will be more than 100 metres from any areas of forest vegetation. The office building will be at least 119 metres from any forest vegetation to the east.</p> <p>Land within a radius of not less than 50 metres of each of those structures is to be established and maintained as an Asset Protection Zone (APZ), and the assessed BAL will be BAL-LOW. While no construction requirements apply for BAL-LOW, construction material will be non-combustible.</p> <p>Buildings and their occupants will be afforded protection from exposure to a bushfire.</p>
ii	<i>provide for a defensible space to be located around buildings</i>	<p>Defendable space will be available around buildings via the distance to any forest vegetation and the maintenance of APZs in relation to grassland vegetation.</p> <p>In conjunction with the management of areas within the site as an APZ, the existing and proposed future conditions on the site are such that any potential bushfire hazard vegetation within the impact area will be gradually reduced as the project progresses through the stages shown at Figure 5.1 to Figure 5.7.</p>
iii	<i>provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings</i>	<p>The proposal will provide adequate separation to potential bushfire hazard vegetation.</p> <p>The office and weighbridge structures will be more than 100 metres from any areas of forest vegetation. The office building will be at least 119 metres from any forest vegetation to the east.</p> <p>Land within a radius of not less than 50 metres of each of those structures is to be established and maintained as an Asset Protection Zone (APZ).</p> <p>Construction material will be non-combustible which, in combination with APZs, will reduce potential for fire spread to the structures.</p> <p>Any stockpiles will be greater than 50 metres from any structure(s).</p>
iv	<i>ensure that appropriate operational access and egress for emergency service personnel and occupants is available</i>	<p>Access to the site from The Bucketts Way will be via the full road construction within Maytoms Lane, and then within the site from Maytoms Lane to the main impact area as shown in the Figures to this report.</p> <p>As the proposed development involves access to, and movement within, the site for large trucks and heavy machinery, the standard of access will facilitate appropriate operational access and egress for emergency service vehicles, at the same time that employees/occupants may potentially be attempting to evacuate the site.</p>

Table 7.1.1		
Objective		Comment
v	<i>provide for ongoing management and maintenance of BPMs</i>	The use and occupation of the land and proposed development will be subject to management in use procedures to ensure the ongoing management and maintenance of bushfire protection measures. In this regard, the management and use of the site will be subject to a separate Bushfire Management Plan (BMP) to be prepared after any consent is granted for the proposal and prior to commencement of the proposed use.
vi	<i>ensure that utility services are adequate to meet the needs of firefighters</i>	No public utility services will be extended to the quarry.  Water supply is to be obtained via capture and reuse of runoff on site. Water captured will be stored in dams or tanks. Where water is stored in tanks, any tanks are to be provided with a Storz fitting to enable connection for RFS purposes.

## 8. RECOMMENDATIONS: BUSHFIRE PROTECTION MEASURES

In terms of Bushfire Protection Measures, the following is recommended for the proposed development on land at 67 Maytoms Lane, Booral:

- A. Land within a radius of not less than 50 metres around the office and weighbridge structures is to be established and maintained as an Asset Protection Zone (APZ).
- B. For the purposes of (A), the APZ is to be maintained in accordance with the requirements for an Inner Protection Area (IPA) as described in Appendix 4 of *Planning for Bush Fire Protection 2019*. When establishing and maintaining an IPA, the following requirements apply:
  - (i) tree canopy cover should be less than 15% at maturity,
  - (ii) trees at maturity should not touch or overhang the building,
  - (iii) lower limbs should be removed up to a height of 2m above the ground,
  - (iv) tree canopies should be separated by 2 to 5m,
  - (v) preference should be given to smooth-barked and evergreen trees,
  - (vi) large discontinuities or gaps in vegetation should be provided to slow down or break the progress of fire towards buildings,
  - (vii) shrubs should not be located under trees,
  - (viii) shrubs should not form more than 10% ground cover,
  - (ix) clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation,
  - (x) grass should be kept mowed (as a guide, grass should be kept to no more than 100mm in height), and
  - (xi) leaves and vegetation debris should be removed.
- C. Construction of the office and any other buildings/structures proposed on the land is to be of wholly non-combustible construction.
- D. A Bushfire Management Plan (BMP) is to be prepared and implemented prior to the commencement of works on the proposed development.
- E. A Bushfire Emergency Management and Evacuation Plan (BEMEP) is to be prepared and implemented prior to the commissioning of the proposed hard rock quarry. The BEMEP

is to be prepared consistent with the NSW RFS document: A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan. A copy of the BEMEP is to be provided to the Local Emergency Management Committee for its information prior to commissioning of the development.

## 9. References

NSW Rural Fire Service (2019)

*Planning for Bush Fire Protection 2019*

Standards Australia (2018)

*AS3959-2018 Construction of buildings in bushfire-prone areas*