



WESTERN
ENVIRONMENTAL

Preliminary Bushfire Planning Report

Tandegin Wind Farm
Collgar Renewables

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Tandegin Wind Farm
Collgar Renewables

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Appendix A: Development Layout Plans
Appendix B: Classified Vegetation Photos
Appendix C: Method 2 BAL Calculations
Appendix D: BESS and Substation Layout Plans
Appendix E: Vehicle Access Technical Requirements
Appendix F: Asset Protection Zone Technical Requirements
Appendix G: Wind Turbine Generators BAL Assessments

1.1 Introduction

Western Environmental Approvals Pty Ltd (WEPL) was commissioned to undertake a bushfire assessment and provide bushfire planning advice to inform the preliminary design stage of the Collgar Renewables Tandegin Wind Farm project.

1.2 Proposal Details

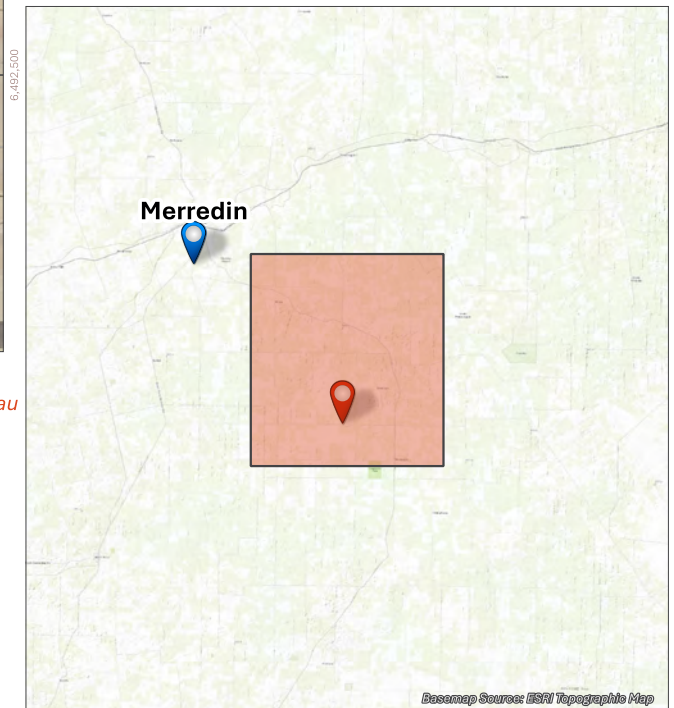
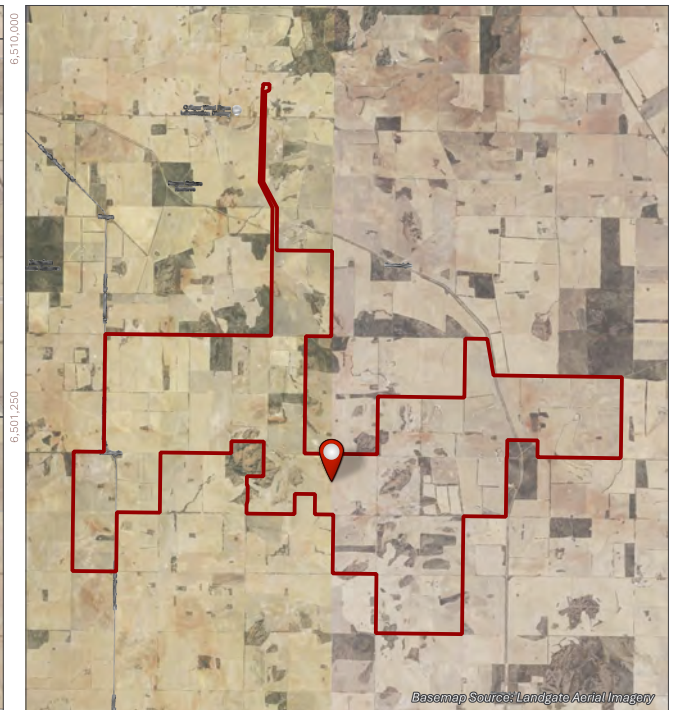
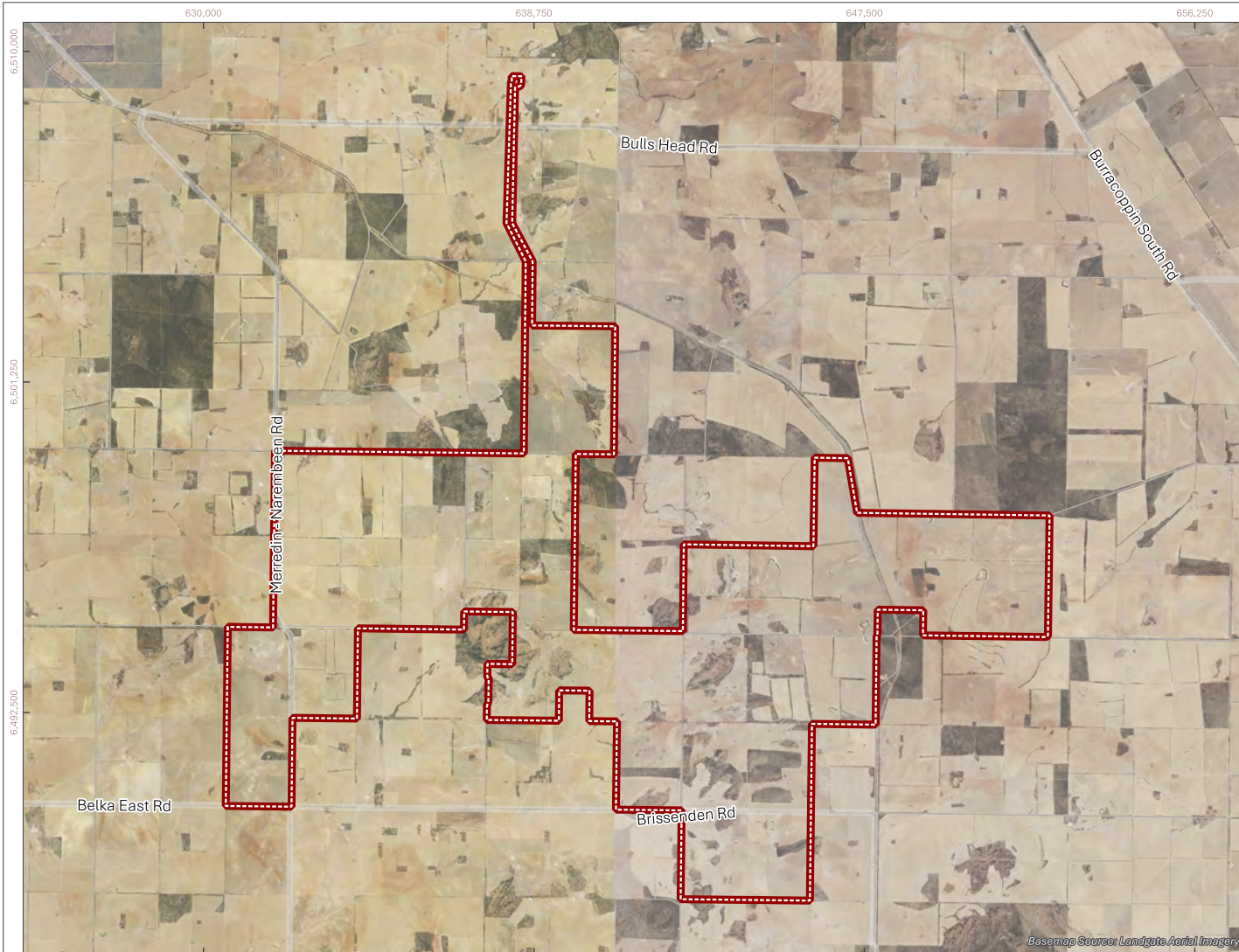
The proposed wind farm is located approximately 25 km south-east of Merredin and spans an area of approximately 16,660 hectares (the project area, Figure 1). The project involves the development of a 300-megawatt (MW) wind farm comprising:

- 50 wind turbines generators (WTGs).
- Battery energy storage system (BESS).
- Substation.
- Site office and operations and maintenance (O&M) buildings.
- Workforce accommodation camp.
- Incidental infrastructure including transmission lines, laydown areas, water storage, access roads and hardstands.

Considering the size and scale of the proposed development, the project area has been split into five (5) areas, including:

- Project Area 1 - South-West (Figure 2);
- Project Area 2 - North-West (Figure 3);
- Project Area 3 - Central (Figure 4);
- Project Area 4 - North-East (Figure 5); and
- Project Area 5 - South-East (Figure 6).

A copy of the overall development layout is provided in Appendix A.



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0 1.5 3 4.5 6 km

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

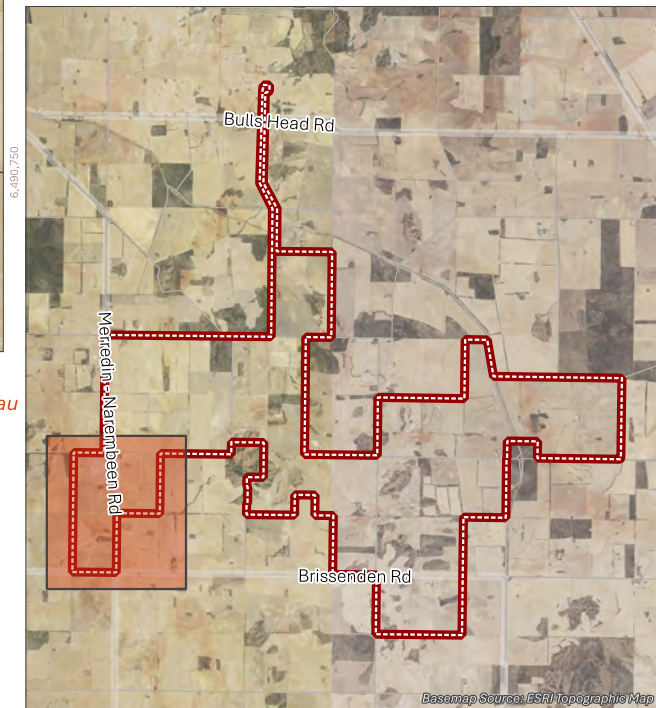
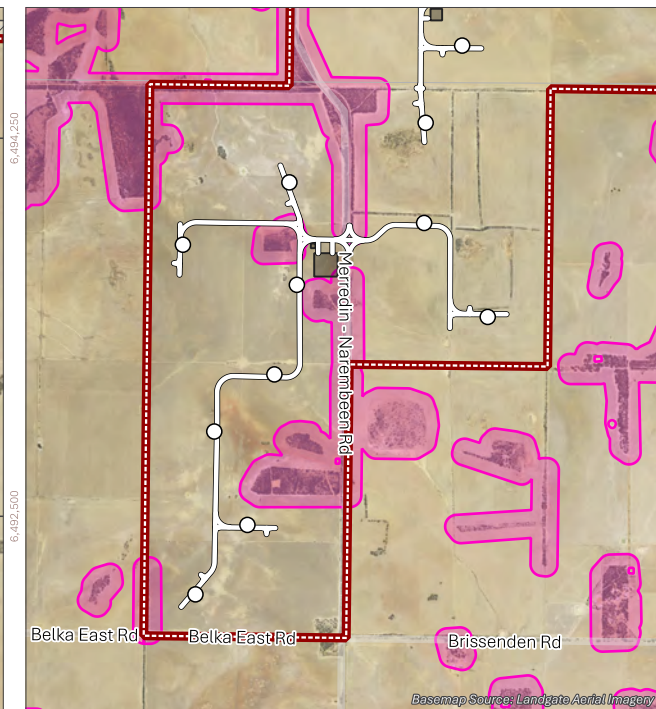
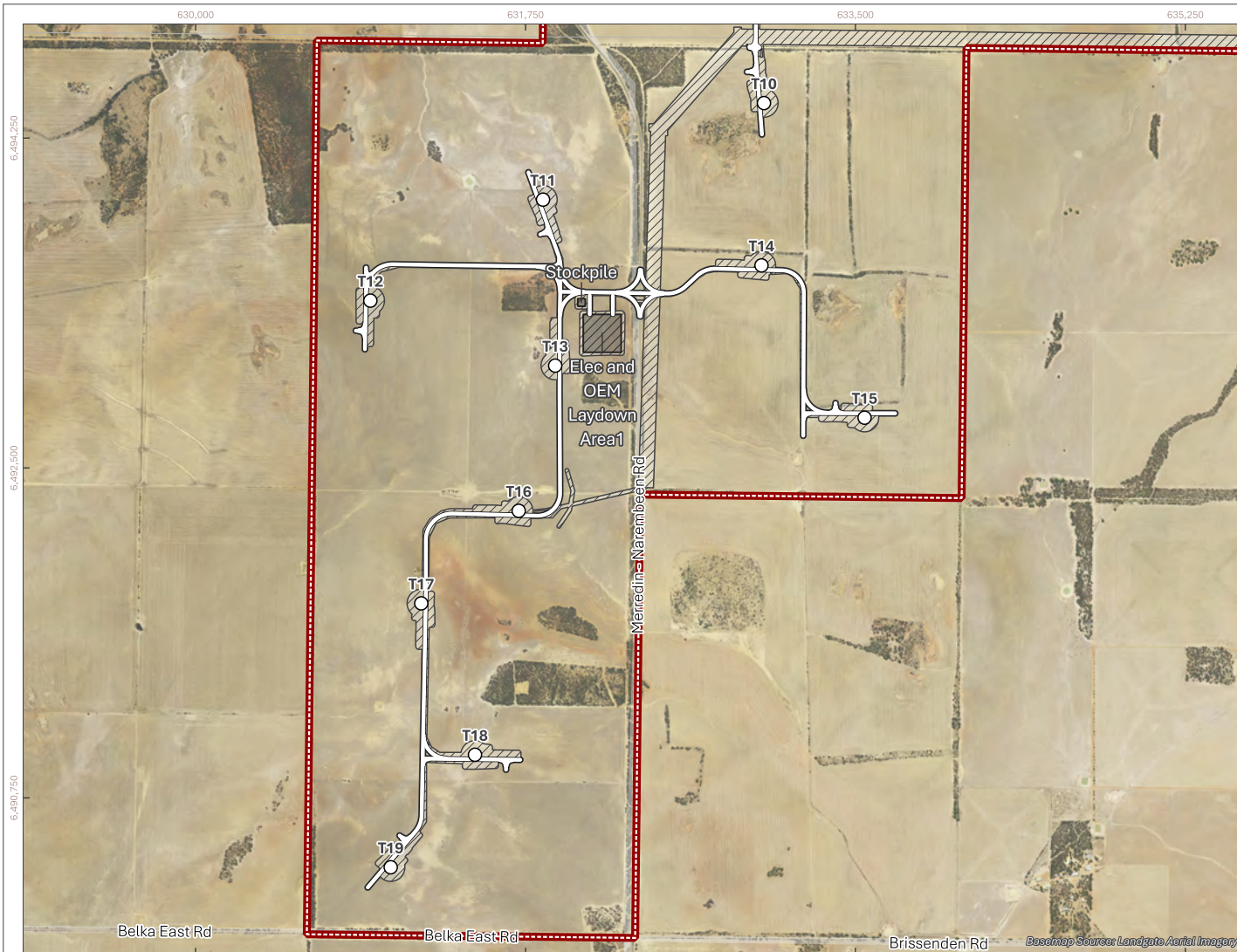
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Figure 1.1: Site Overview

 Project Area

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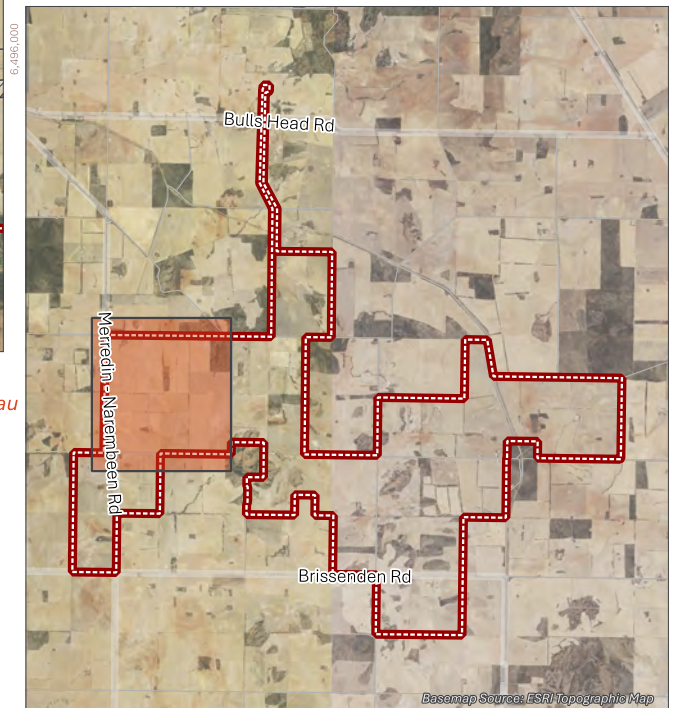
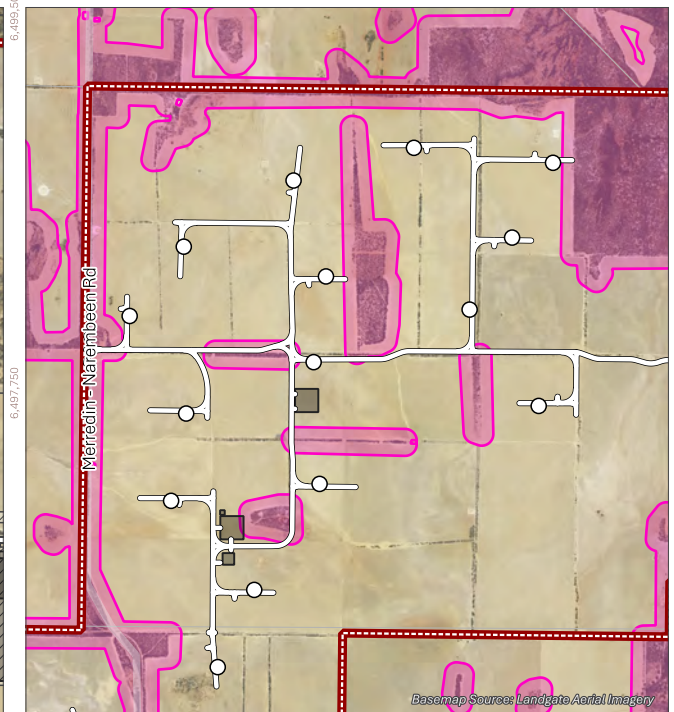
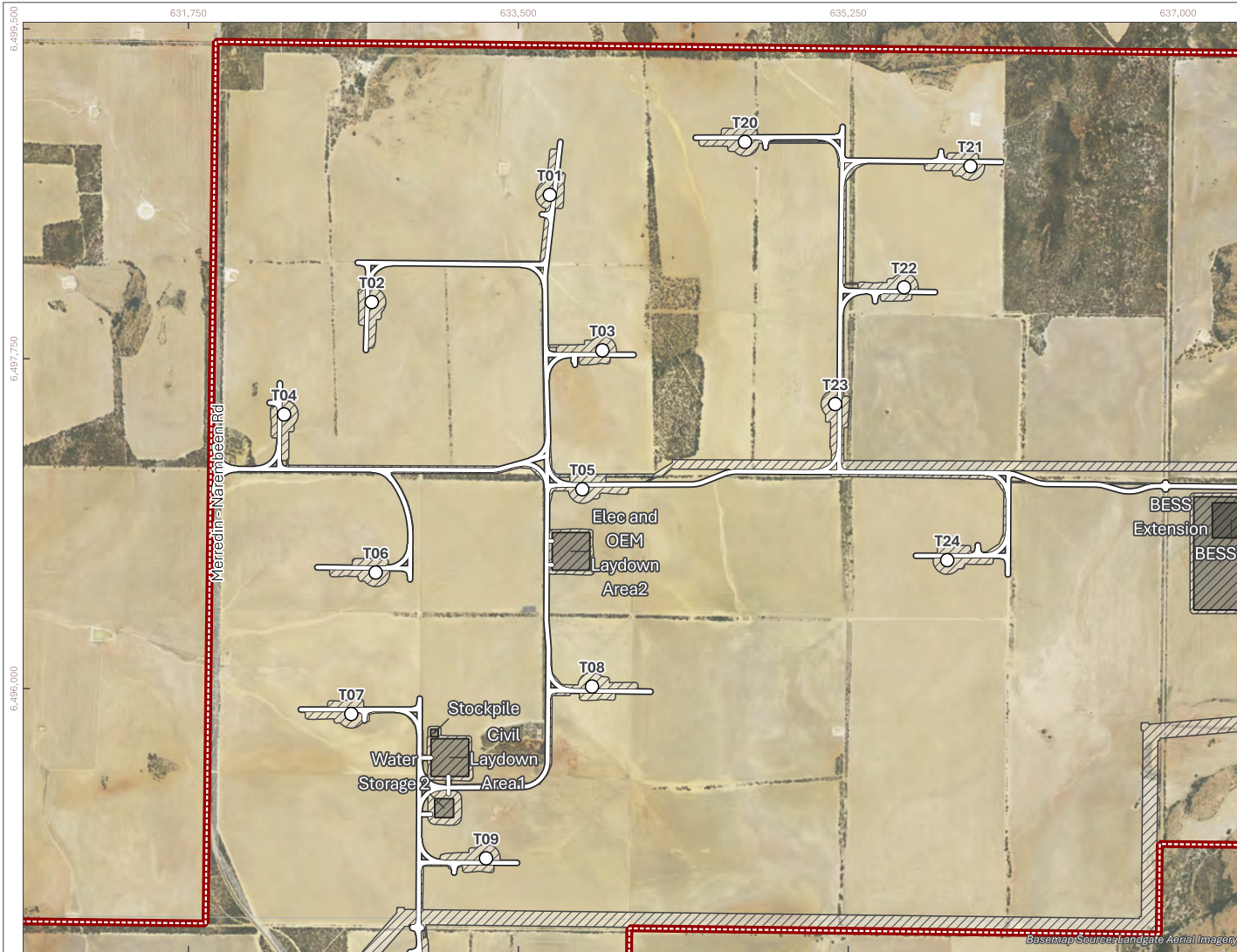
Figure 2: Project Area 1 – South West

- Project Area
- Wind Turbine
- Access Road
- Building Site
- Indicative Footprint

Bush Fire Prone Area Planning (OBRM-023)

Bushfire Prone Area 2

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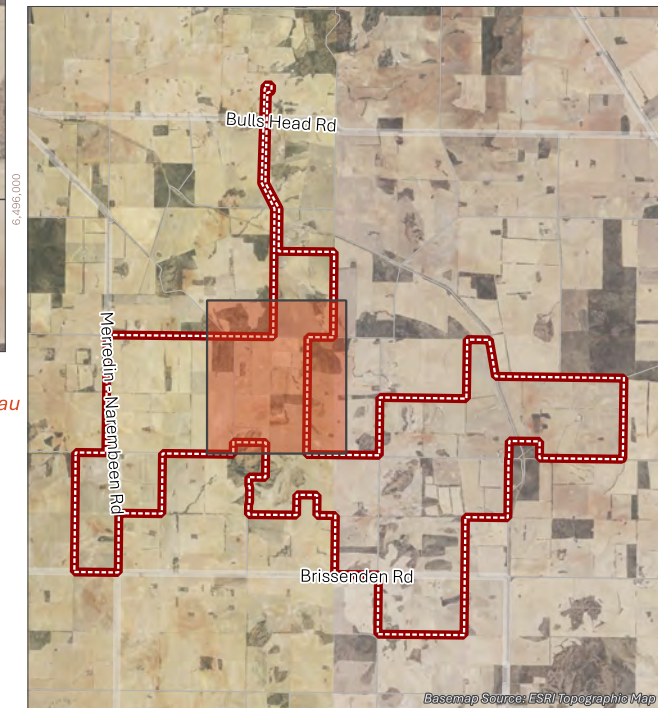
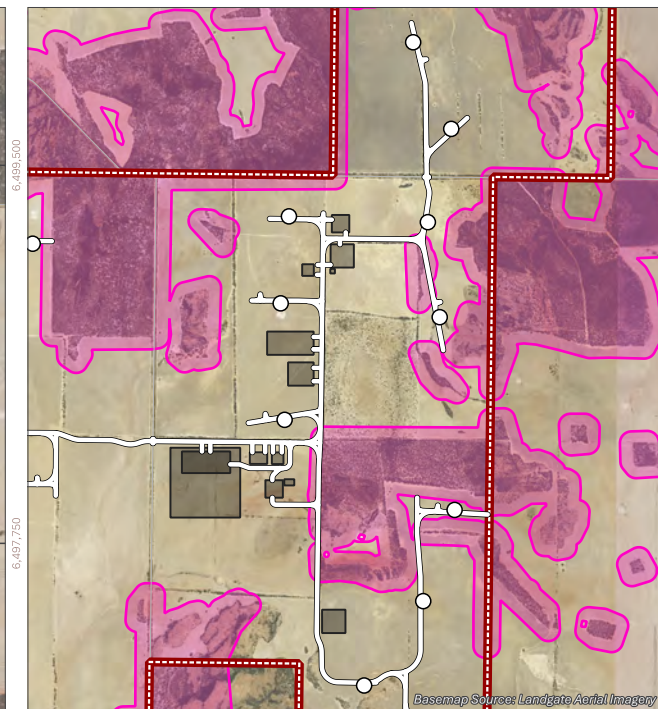
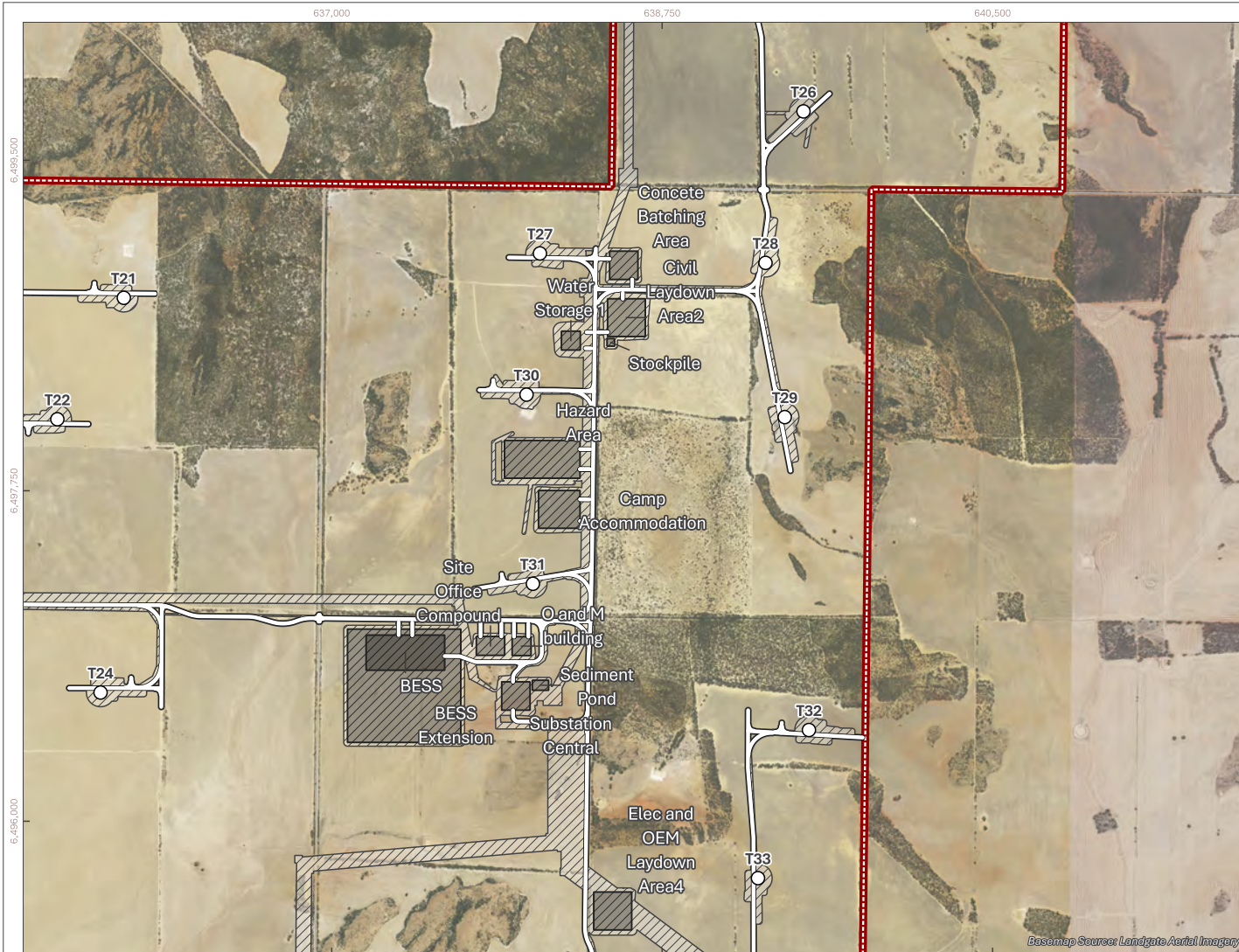
Figure 3: Project Area 2 – North West

- Project Area
- Wind Turbine
- Access Road
- Building Site
- Indicative Footprint

Bush Fire Prone Area Planning (OBRM-023)

Bushfire Prone Area 2

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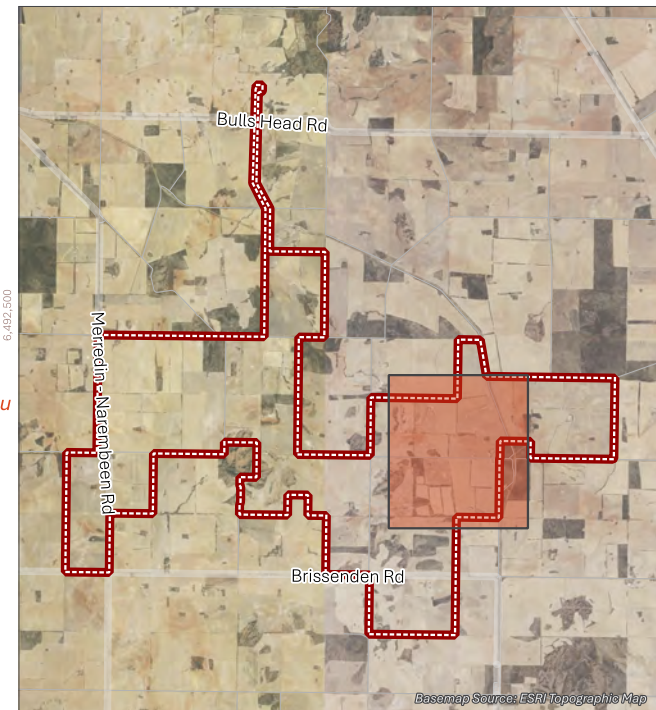
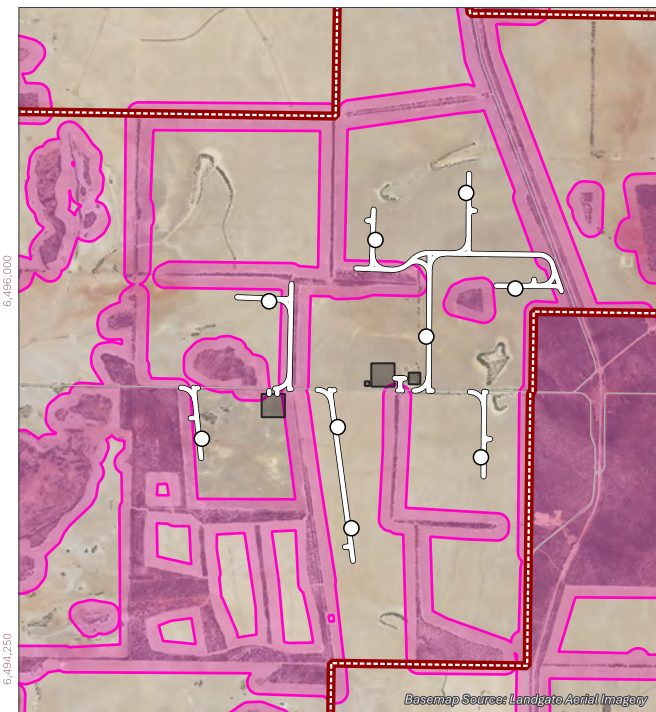
Figure 4: Project Area 3 – Central

- Project Area
- Wind Turbine
- Access Road
- Building Site
- Indicative Footprint

Bush Fire Prone Area Planning (OBRM-023)

Bushfire Prone Area 2

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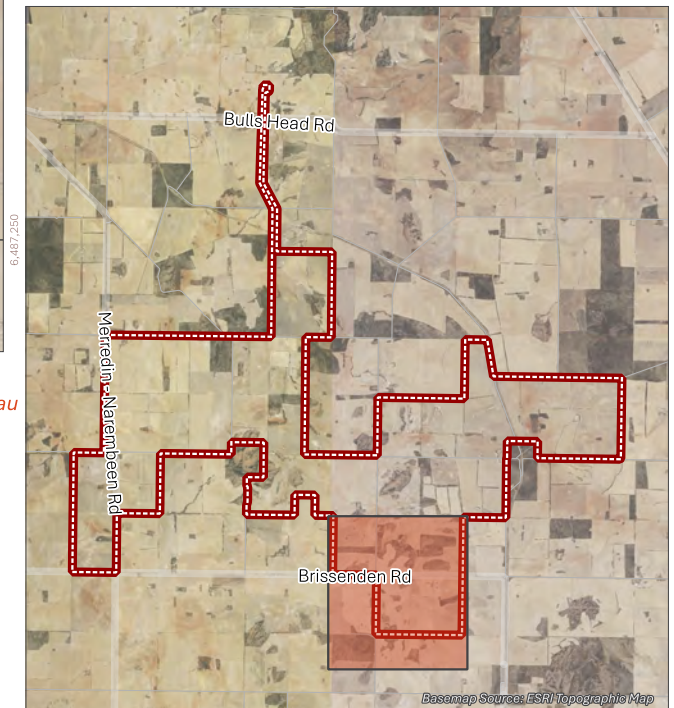
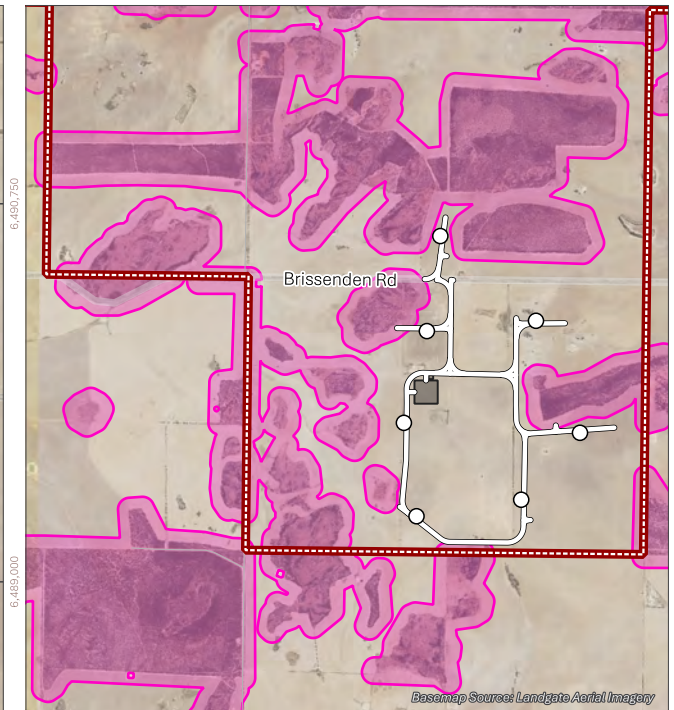
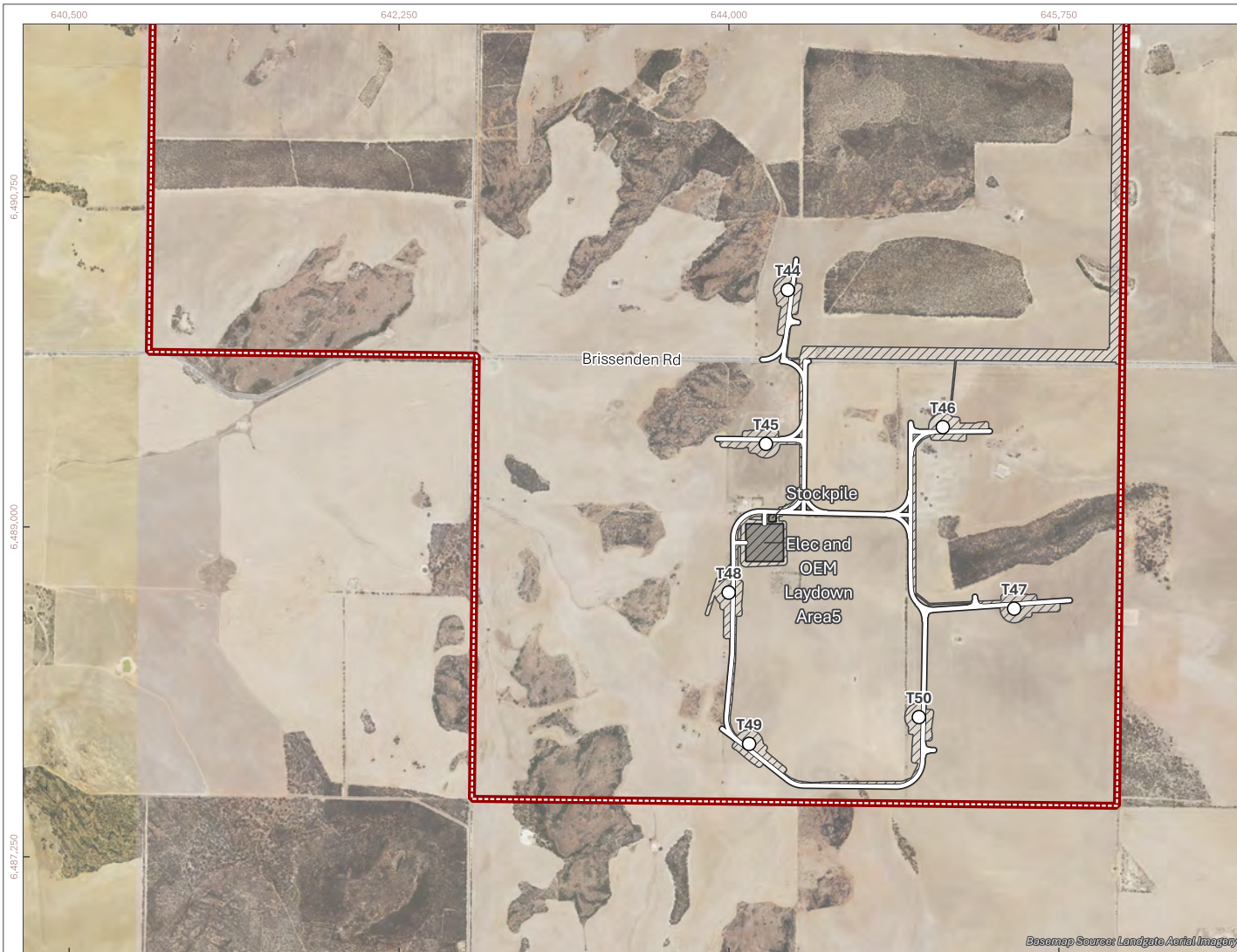
Figure 5: Project Area 4 – North East

- Project Area
- Wind Turbine
- Access Road
- Building Site
- Indicative Footprint

Bush Fire Prone Area Planning (OBRM-023)

Bushfire Prone Area 2

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Figure 6: Project Area 5 – South East

- Project Area
- Wind Turbine
- Access Road
- Building Site
- Indicative Footprint

- Bush Fire Prone Area Planning (OBRM-023)**
- Bushfire Prone Area 2

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1.3 Map of Bushfire Prone Areas

Portions of the project areas are designated as bushfire prone on the *Western Australia State Map of Bush Fire Prone Areas* (DFES, 2025). The designation of an area as bushfire prone reflects the potential for bushfire attack and triggers the application of *State Planning Policy 3.7 Bushfire* (SPP 3.7; WAPC, 2024a) and the associated *Planning for Bushfire Guidelines* (the Guidelines; WAPC, 2024b). However, as shown on Figure 2-Figure 5, no buildings, assets or infrastructure are proposed within an area designated as bushfire prone. Accordingly, the proposed development is considered exempt from an assessment against SPP 3.7 and the Guidelines.

Notwithstanding the above, it is acknowledged that renewable energy facilities can be prone to bushfires and can potentially contribute to, prolong or increase the intensity of a bushfire. Many regional local governments are exercising discretion under Clause 67 (q) & (r) of the *Planning and Development (Local Planning Scheme) Regulations 2015* and requesting a bushfire assessment to be undertaken, irrespective of whether the proposal is designated as bushfire prone or exempt from assessment under SPP 3.7 and the Guidelines.

1.4 Purpose

This preliminary bushfire planning report has been prepared to inform the initial design of the proposed wind farm. It can also accompany the development application given it will demonstrate to the decision-maker that the proposed wind farm adequately addresses the relevant matters under the *Planning and Development (Local Planning Scheme) Regulations 2015* by adopting industry best practices for renewable energy facilities.

1.5 Assessment Framework

The following policies, guidelines and standards have been used to inform the requirements and recommendations for the proposed wind farm:

- *State Planning Policy 3.7 - Bushfire* (WAPC, 2024a).
- *Planning for Bushfire Guidelines* (WAPC, 2024b).
- *Draft Renewable Energy Planning Code and Guidelines* (the RE Code and Guidelines; WAPC, 2025a).
- *Country Fire Authority (CFA) Design Guidelines and Model Requirements for Renewable Energy Facilities Version 4* (the CFA Design Guidelines; State of Victoria, 2023).
- *Australian Standard (AS) 3959: 2018 Construction of buildings in bushfire prone areas* (AS 3959: 2018; SA, 2018).

A brief summary and applicability of each of the above documents is provided in the following sections.

1.5.1 State Planning Policy 3.7 Bushfire and the Planning for Bushfire Guidelines

SPP 3.7 and the Guidelines seek to implement effective, risk-based land use planning and development which in the first instance avoids the bushfire risk, but where unavoidable, manages and/or mitigates the risk to people, property and infrastructure to an acceptable level. The preservation of life and the management of bushfire impact are paramount.

Policy measures under SPP 3.7 are satisfied when it is demonstrated that the planning proposal complies with the requirement under the Guidelines, demonstrated through the preparation of a Bushfire Management Plan (BMP). SPP 3.7 and the Guidelines only apply to habitable buildings and land uses within a designated bushfire prone area, as shown in Plate 1. However, this does not preclude landowners and proponents from striving to achieve better outcomes by voluntarily complying with the provisions provided in the Guidelines.

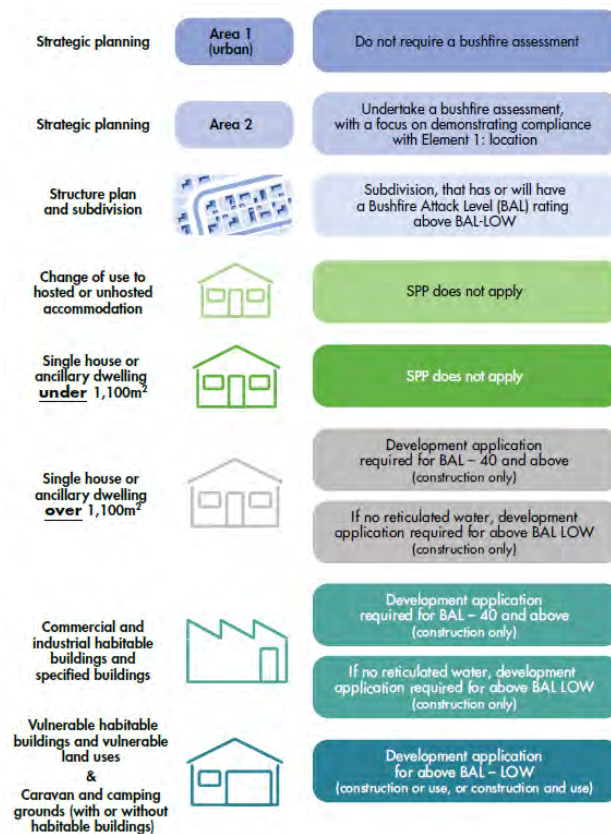


Plate 1: Diagram of triggers for assessment under SPP 3.7 and the Guidelines.

There is no statutory trigger for the proposed wind farm to be assessed against SPP 3.7 and the Guidelines given all components are not within a bushfire prone area. In addition, the majority of the proposed development comprises of non-habitable infrastructure and assets. While the proposed wind farm is exempt from SPP 3.7 and the Guidelines, this assessment still gives due regard to the provisions under SPP 3.7 and the Guidelines given this provides the foundation for bushfire risk planning in Western Australia.

1.5.2 Draft Renewable Energy Planning Code and Guidelines

The draft RE Code and Guidelines have been prepared by the Western Australian Planning Commission (WAPC) and is currently undergoing public consultation. The State Government have identified the need for a clear and consistent development assessment framework for renewable energy facilities in Western Australia. This includes requirements relating to bushfire hazards given the bulk of renewable energy facilities are exempt from an assessment against SPP 3.7 and the Guidelines. Currently, the draft RE Code and Guidelines only considers wind farms and associated infrastructure, with BESS facilities, transmission systems and solar farms to be considered under future revisions.

In the absence of a bushfire assessment framework for renewable energy facilities in Western Australia, the proposed WTGs and associated infrastructure have been assessed against the bushfire requirements in the draft RE Code and Guidelines. Associated infrastructure means the permanent and temporary buildings, structures and other infrastructure associated with energy infrastructure, including meteorological masts, habitable buildings (such as O&M and office buildings), storage buildings, fuel storage tanks, mobile concrete batching plants, internal access tracks, fencing, firefighting equipment, gates and signage.

The proposed development includes renewable energy infrastructure not currently covered by the draft RE Code and Guidelines, including the BESS and substation. These have been assessed against the requirements CFA Design Guidelines, where deemed appropriate.

1.5.3 CFA Design Guidelines and Model Requirements for Renewable Energy Facilities

In the absence of a bushfire assessment framework that considers BESS facilities and substations, the Country Fire Authority (CFA) *Design Guidelines and Model Requirements for Renewable Energy Facilities Version 4* (the CFA Design Guidelines; State of Victoria, 2023) have been generally adopted as a best practice in Western Australia. Assessment of renewable energy facilities against the CFA Design Guidelines is supported by the Department of Planning, Lands and Heritage (DPLH) and the Department of Fire and Emergency Services (DFES). The requirements under the CFA Guidelines have been tailored to align with the Western Australia planning and risk management frameworks.

1.5.4 Australian Standard 3959: 2018 Construction of buildings in bushfire prone areas

AS 3959: 2018 outlines a bushfire risk assessment methodology which is widely adopted in Australia and has been used in this assessment to determine the bushfire attack level (BAL) and inform recommendations. The output of the BAL assessment is an estimation of the radiant heat impact experienced at the building interface (expressed in kilowatts per metre squared) from a potential bushfire which is then categorised into a rating system based on the level of heat exposure and associated risk (referred to as the Bushfire Attack Level [BAL] rating). A description of each BAL rating, as defined in AS 3959: 2018, is provided in Table 1 and Plate 2.

Table 1: BAL Description

Bushfire Attack Level	Radian heat flux exposure thresholds	Description of predicated bushfire attack and levels of exposure
BAL-LOW	-	There is insufficient risk to warrant specific bushfire planning or building construction requirements.
BAL-12.5	<12.5kW/m ²	There is risk of ember attack.
BAL-19	>12.5kW/m ² to <19kW/m ²	There is risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to radiant heat.
BAL-29	>19kW/m ² to <29kW/m ²	There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level of radiant heat.
BAL-40	>29kW/m ² to <40kW/m ²	There is an increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front.
BAL-FZ	>40kW/m ²	There is an extremely high risk of ember attack and burning debris ignited by windborne embers, and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front.

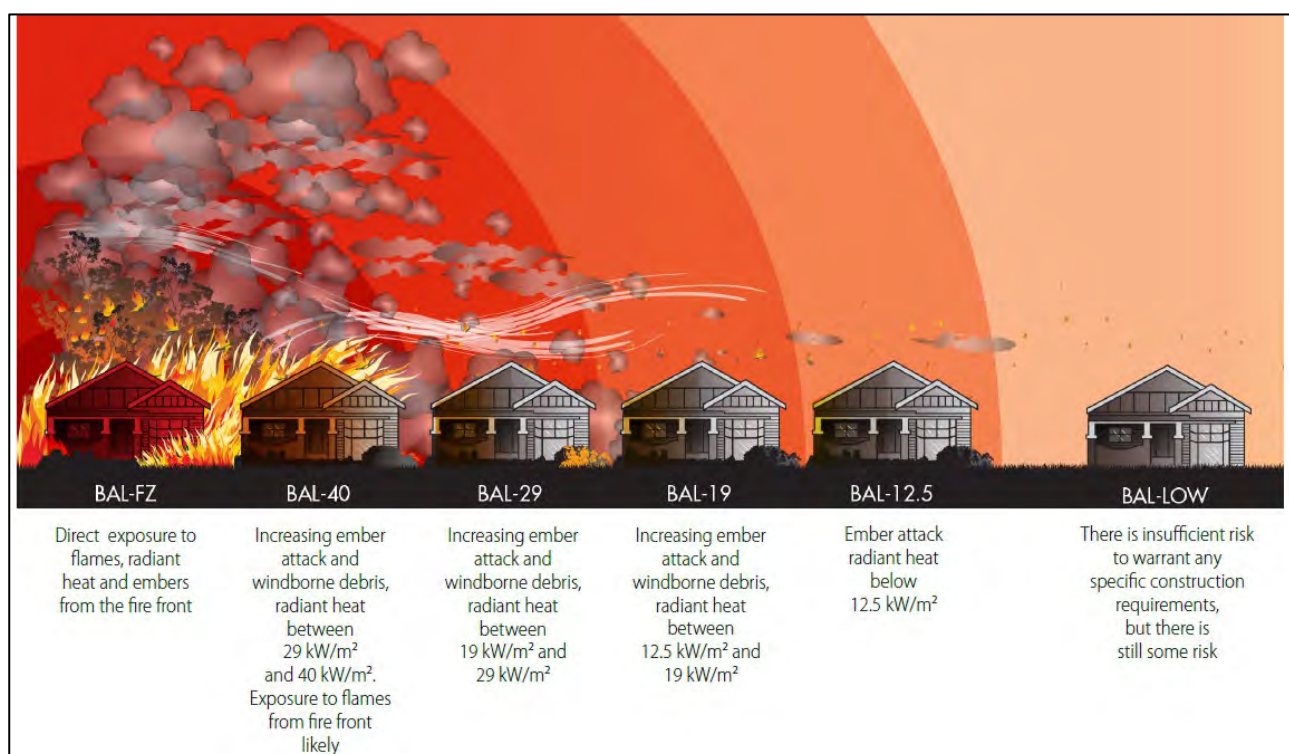


Plate 2: BAL Ratings Explained

AS 3959: 2018 includes two assessment methods for determining the BAL, both of which have been utilised in this assessment to determine the radiant heat impact on the proposed assets and to inform recommendations to reduce the bushfire risk.

Method 1 - Simplified Procedure

A simple assessment procedure that involves a five-step process to determine the BAL rating. This includes:

- 1) Determining the relevant Fire Danger Index (FDI) for an area.
- 2) Classifying vegetation within 100 m¹ of a proposed building or asset.
- 3) Measuring effective slope under the classified vegetation.
- 4) Determining the separation between classified vegetation and the buildings and assets.
- 5) Determining the BAL rating in accordance with Table 2.5 of AS 3959: 2018.

A Method 1 BAL assessment has been undertaken for each WTG and the development envelopes for the BESS, substation, accommodation camp, site office and O&M buildings. The Method 1 assessment has been undertaken to ensure all future habitable buildings with the development envelopes and the WTGs are subject to a radiant heat impact not exceeding 29kW/m² (BAL-29). This is considered an acceptable radiant heat impact under SPP 3.7 and the draft RE Code and Guidelines.

Method 2 - Detailed Procedure

A detailed assessment procedure that uses site specific parameters to determine the radiant heat impact. Method 2 is applied where more specific results are sought or where site conditions are outside of the limits of Method 1.

A Method 2 BAL assessment has been undertaken for the BESS and substations to ensure all components that have potential to ignite, prolong or contribute to the intensity of a bushfire are subject to a radiant heat impact not exceeding 10kW/m² calculated using a flame temperature of 1090K. This has been widely adopted as an acceptable radiant heat impact for high-risk assets in Western Australia. This also aligns with the CFA Design Guidelines which requires BESS and substations to be separated from bushfire hazards to ensure the radiant heat impact from surrounding vegetation does not create the potential for ignition of on-site infrastructure or where a fire within the facility does not create the potential for ignition of surrounding vegetation.

¹ Whilst AS 3959: 2018 utilises a 100 m assessment area, this is expanded to 150 m in WA for bushfire assessments that are required to address *State Planning Policy 3.7 Bushfire*. WEPL consider this 150 m assessment area as best-practice and have applied it to this bushfire assessment.

2. Bushfire Assessments

2.1 Bushfire Assessment Inputs

2.1.1 Fire Danger Index

A blanket Fire Danger Index (FDI) 80 is adopted for Western Australia, as outlined in AS3959: 2018.

2.1.2 Vegetation Classification and Slope under Vegetation

Vegetation and effective slope (i.e. slope under vegetation) within 150 m (the assessment area) of each asset was assessed on 27/04/2026 in accordance with the Guidelines and AS 3959: 2018.

Not every proposed building and asset was able to be assessed on the ground due to access limitations. However, field validation identified that vegetation across the subject site was largely homogeneous, with the majority of buildings and assets proposed within open paddocks. The data collected is considered to be sufficient to provide an accurate, albeit conservative, assessment suitable for the purpose of this assessment.

The classified vegetation and effective slope throughout the project area is summarised in Table 2 with photographs and descriptions of each vegetation type that occurs within the project area provided in Appendix B.

Table 2: Classified Vegetation as per AS 3959: 2018

Vegetation classification	Effective slope
Class A Forest	All upslopes and flat land (0 degrees)
Class B Woodland	All upslopes and flat land (0 degrees)
Class D Scrub	Downslope >0 to 5 degrees
Class D Scrub	All upslopes and flat land (0 degrees)
Class G Grassland	Downslope >0 to 5 degrees
Class G Grassland	All upslopes and flat land (0 degrees)
Excluded - clause 2.2.3.2 (e)	-

2.2 Bushfire Assessment Outputs

The BAL assessments have been undertaken in accordance with AS 3959: 2018 using the bushfire assessment inputs in Section 2.1. The outcomes of the BAL assessments are discussed under Section 3 of this report.

2.2.1 Method 1 BAL Assessment

A Method 1 BAL assessment (as outlined in AS 3959: 2018) has been completed for each of the proposed buildings, assets and infrastructure. The Method 1 BAL assessment incorporates the following factors:

- Fire Danger Index (FDI) rating.
- Vegetation class.
- Slope under classified vegetation.
- Distance between the proposed assets and classified vegetation.

Table 3 contains the outputs from the Method 1 BAL assessment for all areas of classified vegetation within the assessment areas. The separation distances have been used to prepare the BAL contour maps which are contained within the following sections, relevant to each asset type that has been assessed.

Table 3: Method 1 BAL Calculations

Vegetation classification	Effective slope	Separation distances required (m)				
		BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
Class A Forest	All upslopes and flat land (0 degrees)	<16	16 - <21	21 - <31	31 - <42	42 - <100
Class B Woodland	All upslopes and flat land (0 degrees)	<10	10 - <14	14 - <20	20 - <29	29 - <100
Class D Scrub	Downslope >0 to 5 degrees	<11	11 - <15	15 - <22	22 - <31	31 - <100
Class D Scrub	All upslopes and flat land (0 degrees)	<10	10 - <13	13 - <19	19 - <27	27 - <100
Class G Grassland	Downslope >0 to 5 degrees	<7	7 - <9	9 - <14	14 - <20	20 - <50
Class G Grassland	All upslopes and flat land (0 degrees)	<6	6 - <8	8 - <12	12 - <17	17 - <50
Excluded - clause 2.2.3.2 (e)	-	No separation distances required - BAL-LOW				

2.2.2 Method 2 BAL Assessment

A Method 2 BAL assessment (as outlined in Appendix B of AS 3959: 2018) has also been completed to determine the minimum separation distance between BESS and substation infrastructure and classified vegetation. The CFA Design Guidelines state that *separation* [of classified vegetation and renewable energy infrastructure] *must be at least the distance where radiant heat flux (output) from the vegetation does not create the potential for ignition of on-site infrastructure*. As detailed in Section 1.5.4, 10 kW/m² radiant heat flux threshold is widely adopted as best practice to ensure sufficient separation distance is established. This threshold has been applied to the BESS and substation given the associated fire hazards they may pose.

A Method 2 BAL calculation was undertaken to determine the required separation distance for BESS and substation infrastructure to be sited in areas subject to a radiant heat flux of 10 kW/m² or less. Inputs to the Method 2 BAL assessment are summarised below and provided in full in Appendix C.

- Relevant Fire Danger Index: FDI 80 (not modified from standard inputs).
- Vegetation classification and slope under vegetation: Refer to Table 3.
- Slope between site and classified vegetation: Flat (0 degrees).
- Flame length: Automatically calculated (refer to Appendix C).
- Flame width: 100 m (not modified from standard inputs).
- Elevation of receiver: Default (peak) value used.
- Flame emissivity: 0.95 (not modified from standard inputs).
- Flame temperature: 1090 K (not modified from standard inputs).

The Method 2 assessment only considers the classified vegetation that has the potential to influence the 10kW/m² separation distances relevant to the BESS and substation development envelopes. Table 4 contains the separation distances calculated using the above inputs in accordance with Appendix B of AS 3959: 2018.

Table 4: Method 2 BAL Calculations (BESS and substations)

Vegetation classification	Effective slope	Separation distances required (m) 10 kW/m ² @ 1090 K
Class G Grassland	Downslope >0 to 5 degrees	> 24.6 m
Class G Grassland	All upslopes and flat land (0 degrees)	> 21.2 m
Excluded - clause 2.2.3.2 (e)	-	No separation distances required - BAL-LOW

3. Findings and Recommendations

3.1 BESS and Substation

3.1.1 Bushfire Assessment Outcomes

The following BAL assessments have been completed for the BESS and substation to inform appropriate siting of future development:

- Method 1 BAL assessment to confirm the 29kW/m² (BAL-29) setback for low risk, incidental development within the BESS and substation development envelopes. This includes storage sheds, water tanks and habitable buildings (if applicable).
- Method 2 BAL assessment to confirm the 10kW/m² setback for high-risk components within the BESS and substation development envelopes. This includes battery units, power conversion units, substations, harmonic filters, etc). The Method 2 BAL calculations are provided in Appendix C.

The above bushfire assessments are provided in Figure 7 and Figure 8 with the applicable setbacks detailed in Table 5.

Table 5: BESS and Substation BAL Setbacks

Development Envelopes	Vegetation classification	Effective Slope	29kW/m ² separation distance	10kW/m ² separation distance
BESS and Substation	Class G Grassland	Downslope >0-5 degrees	9 m	24.6 m
	Class G Grassland	Upslope / flat land	8 m	21.2 m

Based on the disturbance footprint shown on Appendix A, the following setbacks will apply to the development envelopes:

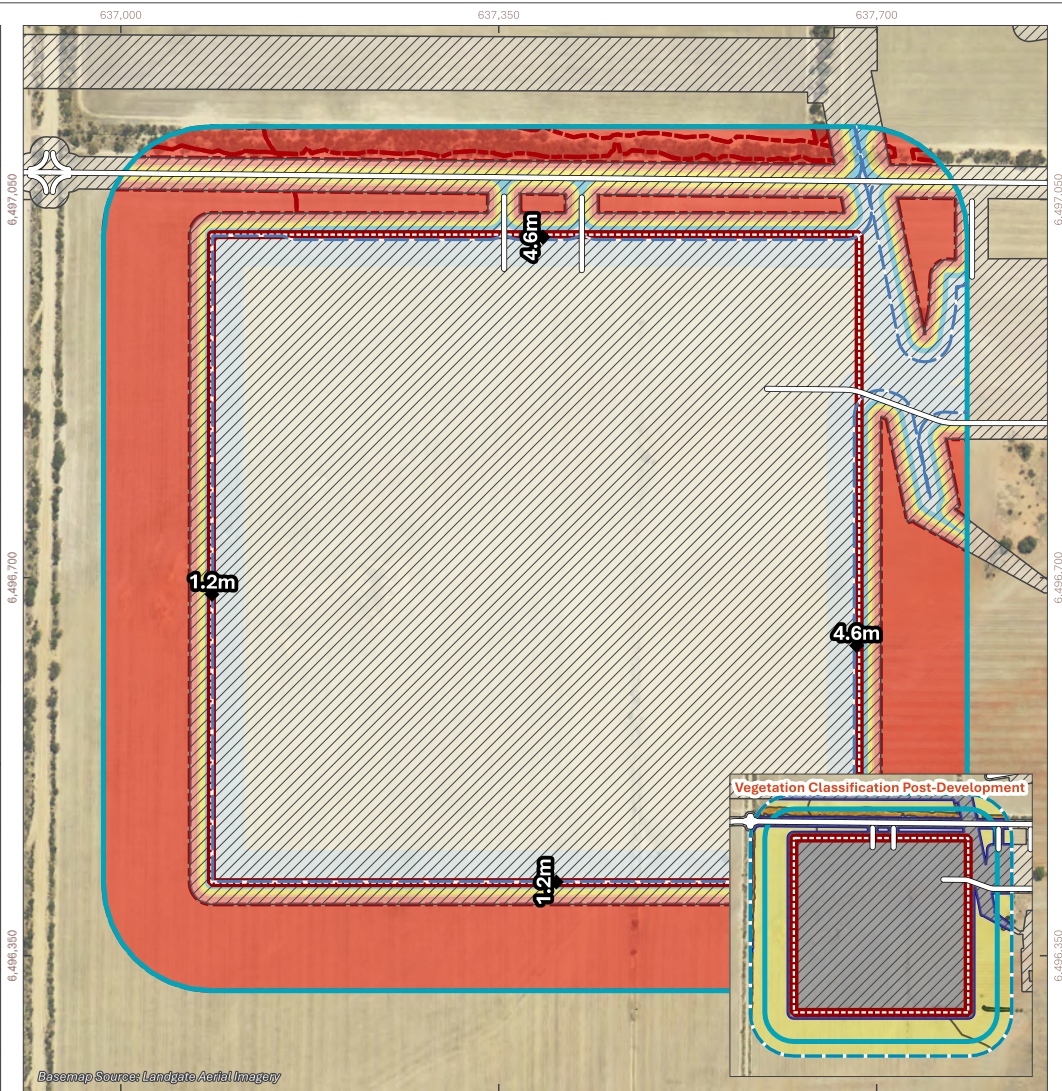
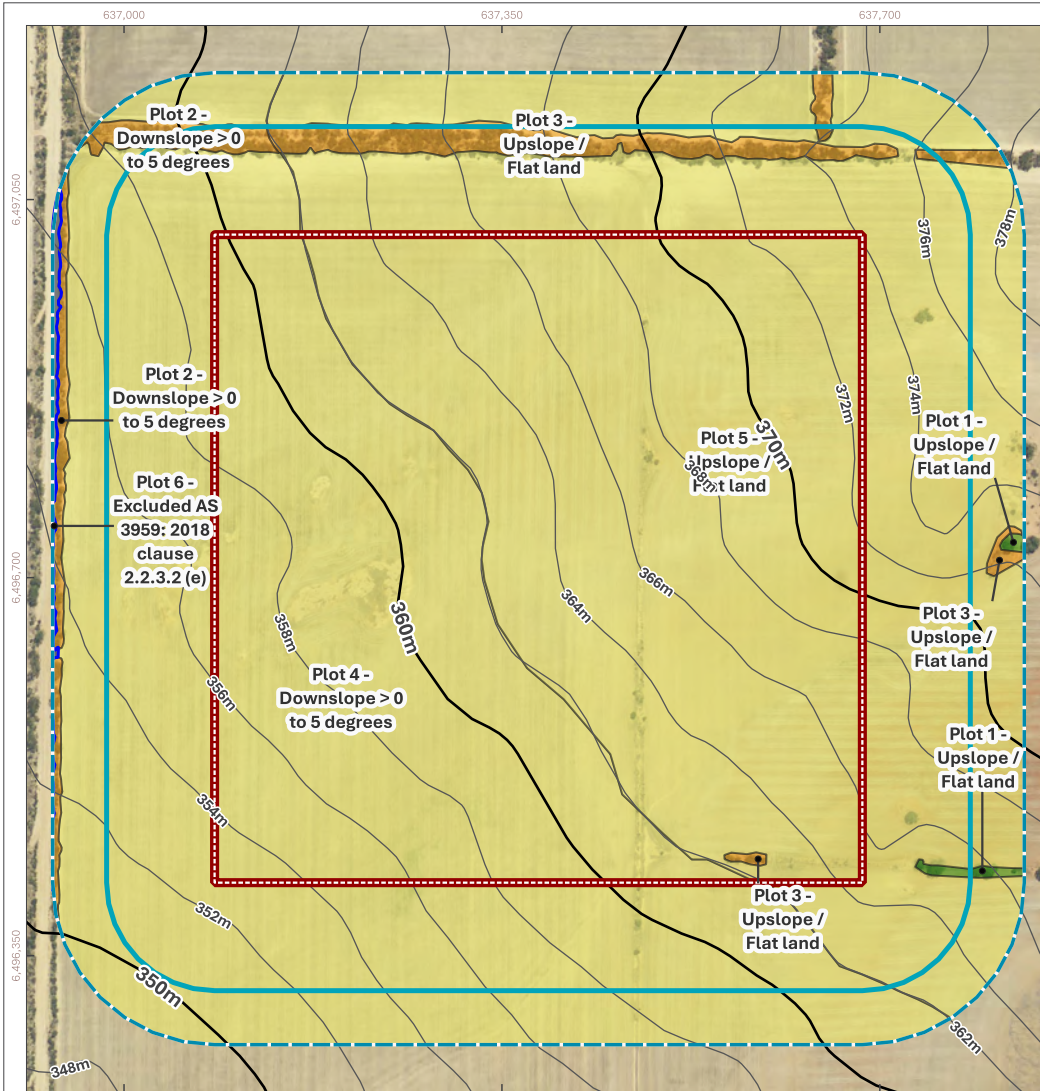
- No setbacks apply to the low-risk components given the entire development envelope will be BAL-29 or below.
- High-risk components within the BESS development envelope will need to be setback 4.6m from the northern and eastern boundaries and 1.2m from the southern and western boundaries of the development envelope to ensure the radiant heat impact does not exceed 10kW/m².
- High risk components within the substation development envelope will need to be setback 4m from the northern boundary of the development envelope to ensure the radiant heat impact does not exceed 10kW/m². Nil setbacks apply to all other development envelope boundaries.

3.1.2 Recommendations

The BESS and substation have been assessed against the CFA Design Guidelines which includes bushfire management measures relating to the following:

- Facility Location (Table 6)
- Facility Design (Table 7).
- Facility Construction and Commissioning (Table 8).
- Facility Operation (Table 9).
- Emergency Planning (Table 10).
- Provision of Emergency Information (Table 11).

The concept layout plans for the BESS and substation (Appendix D) have been used for the basis of this assessment. It is acknowledged that specific details are still unknown given the project is in the preliminary design stage. Where specific details are unknown, the assessment details how compliance can be achieved at detailed design stage.



terravias

0 50 100 150 200 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: 1:7,000 PROJECT NUMBER: A25.368

DRAWN BY / REVIEWED BY:
SM / DW 17/8/2026

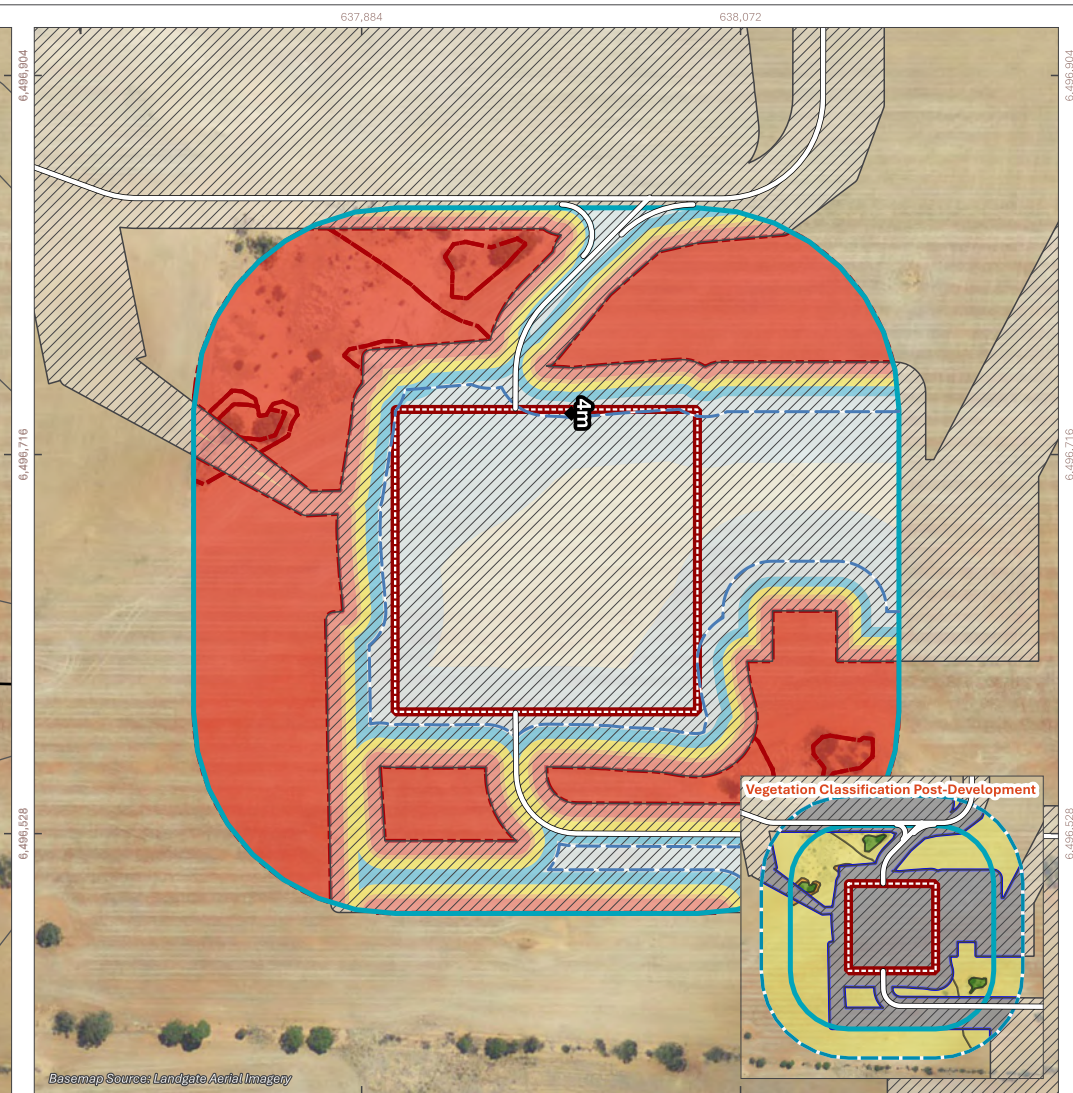
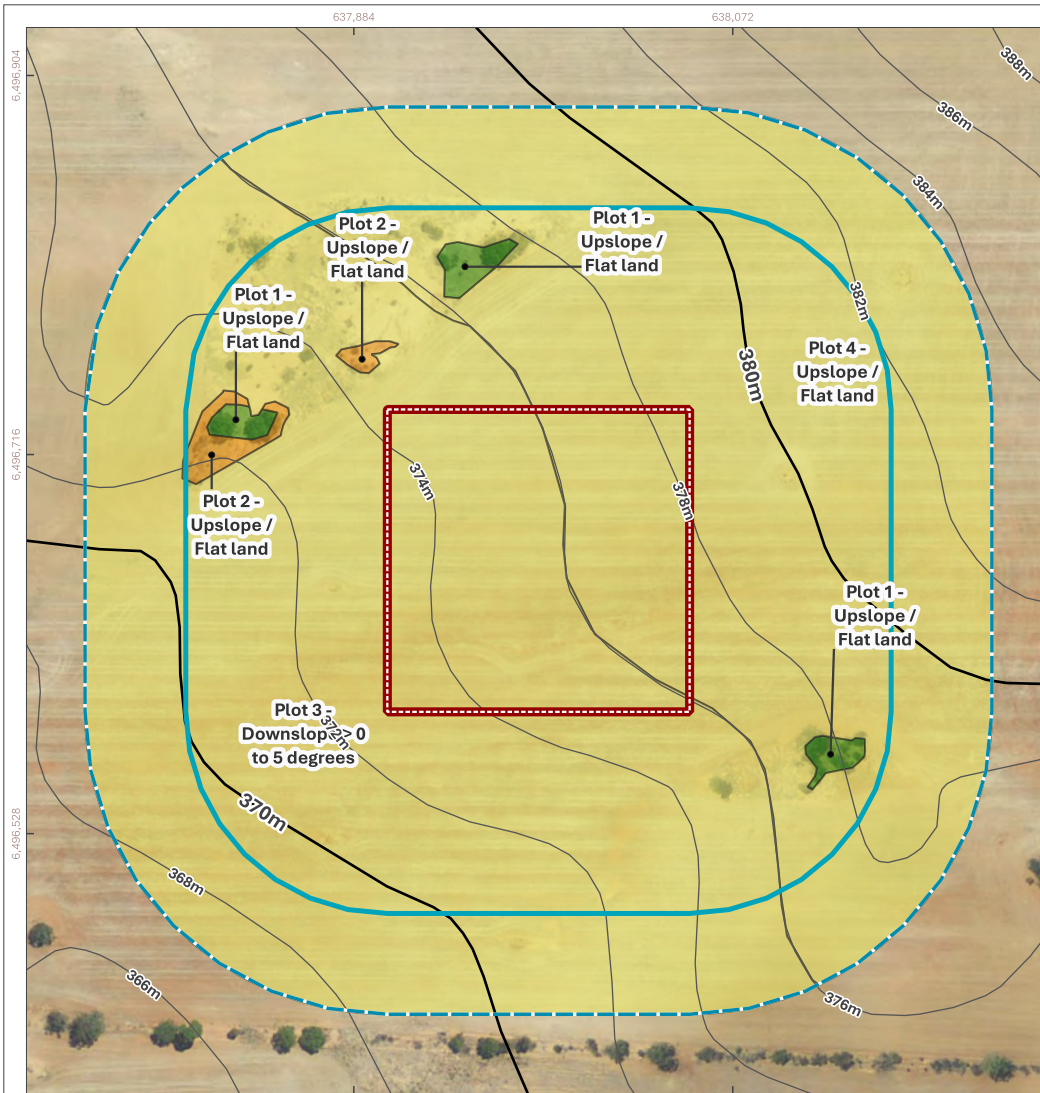
Figure 7: Bushfire Assessment - BESS

- Building Site
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - Indicative Footprint
 - 10kW/m2

- Vegetation Classification**
- Class B - Woodland
 - Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



terravias

0 30 60 90 120 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: 1:3,750 PROJECT NUMBER: A25.368

DRAWN BY / REVIEWED BY: SM / DW 17/8/2026

N

Figure 8: Bushfire Assessment - Substation Central

- Building Site
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - Indicative Footprint
 - 10kW/m2

- Vegetation Classification**
- Class B - Woodland
 - Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW

Table 6: Facility Location

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
Wherever possible, BESS and substation must be sited in low-risk location. Attributes of lower risk environments include: • Grassland • No continuous other vegetation types within 1-20km of the project site. • Generally flat topography, some undulation may be present. • Slopes are less than 5 degrees. • Good road access with multiple routes available to and from the project site. • Not designated as bushfire prone. • No land subject to inundation.	The project area is considered a low-risk environment given it is predominantly grassland with a mosaic pattern of other vegetation types. In addition, the proposed BESS is not located within a designated bushfire prone area.

Table 7: Facility Design Requirements

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
EMERGENCY VEHICLE ACCESS	
Construction of a four (4) metre perimeter road within the perimeter fire break.	The concept layout plans for the BESS and substation indicate perimeter roads around the development envelopes which are a minimum 6m in width.
Roads must be of all-weather construction and capable of accommodating a vehicle of 15 tonnes.	To be confirmed at detailed design stage.
Constructed roads should be a minimum of four (4) metres in trafficable width with a four (4) metre vertical clearance for the width of the formed road surface.	The proposed roads servicing the BESS and substation are a minimum 6m in width. Surface material will be confirmed at detailed design stage.
The average grade should be no more than 1 in 7 (14.4% or 8.1°) with a maximum of no more than 1 in 5 (20% or 11.3°) for no more than 50 metres.	The project area is relatively flat with slopes measured to be less than 5 degrees. Road gradients will be confirmed at detailed design stage however compliance is likely.
Dips in the road should have no more than a 1 in 8 (12.5% or 7.1°) entry and exit angle.	Road gradients will be confirmed at detailed design stage however compliance is likely.
Roads must incorporate passing bays at least every 600m, which must be at least 20 metres long and have a minimum trafficable width of six (6) metres. At least one passing bay must be incorporated where roads are less than 600 metres long.	The proposed roads servicing the BESS and substation have a minimum trafficable width of 6m which provides sufficient space for vehicles to pass without the need for dedicated passing bays.
Road networks must enable responding emergency services to access all areas of the facility, including fire service infrastructure, buildings, BESS and related infrastructure, substations and grid connection areas.	The BESS and substation will be accessible to emergency services personnel.
Provision of at least two (2) but preferably more access points to each part of the facility. The number of access points must be informed through a risk management process.	The main access to the BESS and substation will be via Briant Road to the north. A secondary access point to Allsop Road, adjacent the BESS, should be provided to ensure at least two (2) access points are available.

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
FIREFIGHTING WATER SUPPLY	
Water access points must be clearly identifiable and unobstructed to ensure efficient access.	The location of static water storage tanks will be clearly identifiable through the use of signage.
Static water storage tank installations must comply with <i>AS 2419.1-2021: Fire hydrant installations – System design, installation and commissioning</i> .	The design of the static water storage tanks will be determined at detailed design stage on advice from a suitably qualified engineer.
The static water storage tank(s) must be an above-ground water tank constructed of concrete or steel.	Static water storage tanks will be above ground and constructed of a non-combustible material.
The static water storage tank(s) must be capable of being completely refilled automatically or manually within 24 hours.	Static water storage tanks can be refilled by either filtered bore water (if available) or a water tanker. It is acknowledged that the availability to refill tanks within 24 hours may not be practically possible due to the location of the subject site.
The static water storage tanks must be located at vehicle access points to the facility and must be positioned at least ten (10) metres from any infrastructure (solar panels, wind turbines, battery energy storage systems, etc.).	The concept layout plans for the BESS and substations shall be updated to include a static water storage tank at the vehicle entrance point and setback 10m from nearby infrastructure.
The hard-suction point must be provided, with a 150mm full bore isolation valve equipped with a Storz connection, sized to comply with the required suction hydraulic performance.	Static water storage tanks must be fitted with a Storz connection.
The hard-suction point must be positioned within four (4) metres to a hardstand area and provide a clear access for emergency services personnel.	The concept layout plans for the BESS and substations shall be updated to include a static water storage tank with the Storz connection located within 4m of a hardstand or access road.
An all-weather road access and hardstand must be provided to the hard-suction point. The hardstand must be maintained to a minimum of 15 tonne GVM, 15m long and 6m wide, in accordance with GL-11: DFES Site Planning and Fire Appliance Specifications.	The proposed roads servicing the BESS and substation are a minimum 6m in width. Surface material will be confirmed at detailed design stage however they will be suitable for a fire appliance vehicle to access the static water supply.
The road access and hardstand must be kept clear at all times.	Site maintenance requirements will form part of the operations management plan.
The hard-suction point must be protected from mechanical damage (e.g. bollards) where necessary.	The need for bollards adjacent the Storz connection will be determined at detailed design stage.
Where the access road has one entrance, an eight (8) metre radius turning circle must be provided at the tank.	The static water storage tank should be located adjacent a road where through access is available. If the road terminates at a dead-end, a turnaround area for a Type 3.4 fire appliance must be provided in accordance with the design requirements in Appendix E.
An external water level indicator must be provided to the tank and be visible from the hardstand area.	External water level indicators must be installed on all static water storage tanks.
Signage indicating 'FIRE WATER' and the tank capacity must be fixed to each tank.	Signage must be installed on all static water storage tanks.

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
Signage must be provided at each vehicle entrance to the facility, indicating the direction to the nearest static water tank(s).	Signage must be installed at the vehicle entrance to the BESS and substation indicating the location of the static water storage tank.
BESS facilities where no reticulated water is available, a fire hydrant system that complies with AS 2419.1-2021 must be provided.	A hydrant system shall be installed in accordance with AS 2419.1-2021. The details of the hydrant system will be determined at detailed design stage. Advice from suitably qualified engineer will be required to ensure the system complies with WA legislation
The quantity of static water storage is to be calculated from the number of hydrants required to flow from A2419.1-2021, Table 2.2.5 (D). The fire water supply must be of a quantity no less than 288,000 litres or as per the provisions of AS 2419.1-2021, whichever is the greater. Water supply is calculated based on each hydrant operating at 10L/s for four (4) hours.	The BESS yard area (excluding access roads) is approximately 40,000m ² which results in a total of four (4) hydrants being required. Four (4) hydrants operating at 10L/s for four (4) hours equates to a total water supply of 576,000 litres for the BESS. The substation yard area (excluding access roads) is approximately 10,480m ² which results in a total of three (3) hydrants being required. Three (3) hydrants operating a 10L/s for four (4) hours equates to a total water supply of 432,000 litres for the substation.
Fire hydrants must be provided and located so that every part of the BESS and substation is within reach of a 10m hose stream issuing from a nozzle at the end of a 60m length of hose connected to a fire hydrant outlet.	The concept plans will need to be updated to include the location of hydrants, as per above. Hydrants must be positioned so all infrastructure is within 70m of the hydrant.

FIRE DETECTION AND SUPPRESSION EQUIPMENT

Suitable fire detection and suppression equipment must be provided: - For on-site buildings and structures, according to the requirements of the National Construction Code (NCC). - For storage of dangerous goods, according to the requirements of any Australian Standards for storing and handling dangerous goods. - For electrical installations, a minimum of two (2) suitable fire extinguishers must be provided within 3m - 20m of each Power Conversion Unit. - In all vehicles and heavy equipment, each vehicles must carry at least a nine (9) litre water stored pressure fire extinguisher with a minimum rating of 3A, or other firefighting equipment as a minimum when on-site during the Fire Danger Period.	Fire detection and suppression equipment will be provided in accordance with the relevant legislation. Fire extinguishers will be installed adjacent the BESS and substation infrastructure. All authorised vehicles will be required to carry a fire extinguisher which will be confirmed during site inductions as part of the operational management plan.
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LANDSCAPE SCREENING AND ON-SITE VEGETATION

Any proposed or existing vegetation must be considered in the BMP for its potential to intensify and propagate fire within any away from the site.	The BAL assessments consider all existing vegetation within 150 m of the BESS and substation development envelopes. WEPL is not aware of any vegetation being proposed.
Where landscape screening is required, for example, to screen visual impacts, the design must consider any	If landscape screening is proposed, this will need to be located as to not impact the outcomes of the BAL

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
potential increase in fire risk due to the type (species), density, height, location and overall width of the screening.	assessments. The landscape screening must be reviewed by a bushfire consultant to avoid the introduction of bushfire hazards within proximity to the BESS and substation.
Facilities must be designed so that the radiant heat flux (output) from vegetation does not create the potential for ignition of on-site infrastructure or other vegetation.	BESS and substation infrastructure must be setback from vegetation to ensure the radiant heat impact does not exceed 10kW/m ² , as shown on Figure 7 and Figure 8. This is widely adopted as a sufficient separation to ensure surrounding vegetation does not create the potential for ignition of on-site infrastructure.
Radiant heat impact leading to ignition may be mitigated through: • Vegetation removal (where permitted). • Separation from nearby infrastructure (e.g., fire breaks; refer below). • The provision of thermal barriers at nearby infrastructure.	The radiant heat impact will be reduced through the development envelopes being cleared or maintained to a low threat standard with BESS and substation infrastructure setback from vegetation to ensure the radiant heat impact does not exceed 10kW/m ² , as shown on Figure 7 and Figure 8.
Substations should be surfaced to eliminate all vegetation, including grasses.	The substation surface must be cleared of vegetation and remain non-vegetated.
The Electricity Regulations 1947 and Code of Practice for Personnel Electrical Safety for Vegetation Control Work Near Live Powerlines prescribe vegetation clearance requirements for electric lines based on voltage.	Vegetation under transmission lines will be subject to routine management to achieve minimum clearances, as determined by the network operator.
FIREBREAKS	
A firebreak must be established and maintained around the perimeter of the facility, commencing from the boundary or from the vegetation screening inside the property boundary.	A perimeter firebreak will be maintained around the subject site in accordance with the local government Firebreak Notice.
A firebreak must be established and maintained around the perimeter of controls rooms, electricity compounds, substations and all other buildings onsite.	The BESS and substation will be surrounded by access roads and hardstands.
The width of fire breaks must be a minimum of 10m, and at least the distance where radiant heat flux (output) from the vegetation does not create the potential for ignition of on-site infrastructure.	BESS and substation infrastructure must be setback from vegetation to ensure the radiant heat impact does not exceed 10kW/m ² , as shown on Figure 7 and Figure 8. This is widely adopted as a sufficient separation to ensure surrounding vegetation does not create the potential for ignition of on-site infrastructure.
DESIGN SPECIFIC TO FACILITY TYPE (BESS)	
BESS facilities must incorporate separation distance that prevents fire spread between battery units and: • Other assets • Onsite buildings • The site boundary • Vegetation.	BESS and substation infrastructure must be setback from vegetation to ensure the radiant heat impact does not exceed 10kW/m² to prevent fire spread to vegetation. All assets are adequately setback from the property boundary. Internally, the assets will be separated from each other as per industry best practices. The layout plans have been prepared with inputs from Collgar Renewables who operate a number of renewable energy facilities.

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
A firebreak around the BESS and related infrastructure of a width no less than 10m.	Firebreaks will be maintained in accordance with the local government Firebreak Notice. The 10kW/m ² setbacks enable a 10 m firebreak to be provided.
Layout of site infrastructure considers the safety of emergency responders, minimises the potential for grassfire and/or bushfire to impact the BESS and minimises the potential for fire in BESS units to impact on-site and off-site infrastructure.	The proposed assets are setback from bushfire hazards and each other to minimise potential impacts from a bushfire in adjacent vegetation or impacts from adjacent infrastructure. The increased separation and access arrangements provide a defensible zone for emergency responders to operate from.
The BESS must be located to be reasonably adjacent to a site entrance.	The BESS and substation are located within close proximity to Allsop Road. Direct access to Allsop Road has been recommended to ensure two (2) access points are available.
Located so that the site entrance and fire water tanks are not aligned to the prevailing wind direction.	The prevailing wind direction is not expected to impact site access or access to the proposed static water storage tanks.
Provided with in-built fire and gas detection systems.	Fire detection and suppression equipment will be determined at detailed design stage.
Provided with explosion prevention via sensing and venting or explosion mitigation through deflagration panels.	Explosion prevention systems will be determined at detailed design stage.
Provided with suitable ember protection.	Ember protection will be determined at detailed design stage.
Provided with suitable access roads for emergency services vehicles, to and within the site.	Internal access roads enable fire services to effectively access and egress the subject site.
Installed on a non-combustible surface such as concrete.	BESS and substation infrastructure must be installed on a non-combustible surface.
Provided with suitable ventilation.	Ventilation systems will be determined at detailed design stage.
Provided with impact protection to at least the equivalent of a W guardrail-type barrier, to prevent mechanical damage.	BESS and substation infrastructure will be located within a fenced enclosure to prevent mechanical damage.
Provided with enclosed wiring and buried cabling, except where required to be above-ground for grid connection.	Wiring and cabling details to be determined at detailed design stage.
Provided with spill containment that includes provision for management of fire water runoff.	Spill containment will be a requirement of the Risk Management Plan.

Table 8: Facility Construction and Commissioning

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
Install and commission fire detection and suppression for the facility at the earliest possible stage of construction.	A construction programme is yet to be prepared for the project.

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
Provide first-aid firefighting equipment, such as fire extinguishers (and where possible, portable fire hose reels), appropriate to the identified emergency scenarios, at all construction portables / buildings onsite, in the vicinity of all construction activities, and in site-based vehicles.	Transportable buildings used during the construction phase of the project will include first-aid firefighting equipment.
Provide the required fire protection equipment for any storage of dangerous goods as per the relevant Australian Standards.	Fire protection equipment will be provided in accordance with the relevant standards for the storage of dangerous goods.
Obtain appropriate permits for work during the restricted and prohibited burning periods and ensure that any conditions on the permits are adhered to.	The proponent will be responsible for obtaining any necessary permits during restricted burn periods.
Adhere to restrictions on Total Fire Ban or days of elevated fire danger according to Emergency WA website.	The proponent will adhere to the restrictions of Total Fire Ban days.
During the restricted and prohibited burning periods, ensure vehicle operators are instructed to remain on tracks and are not permitted to drive through paddocks.	Vehicles will only be permitted on designated access roads.
Restrict smoking to prescribed areas and provide suitable ash and butt disposal facilities.	Smoking will be restricted to a prescribed area, away from all fire hazards.
Provide remotely accessible site/system security monitoring at the facility.	Security cameras will be installed to enable remote monitoring of the site.
Provide training for personnel in the use of on-site first aid firefighting equipment, and responsibilities during emergencies.	Personnel nominated as part of the emergency response team will be required to undertake first aid and firefighting equipment training.
Develop an Emergency Plan for the construction and commissioning phase of the project.	An Emergency Plan will be developed for the project which will include emergency procedures during the construction and commissioning phase of the project.
Provide an emergency communication system that is reliable and will operate in the event of power failure.	All vehicles will be fitted with two-way radios to enable communication during an emergency. Mobile phone reception is also available at the site.
Notify DFES at least seven days prior to the commissioning of any high-risk infrastructure at the facility (e.g. BESS and substation).	DFES will be notified prior to commissioning the BESS and substation.
Develop safe work procedures for the facility, including but not limited to: • Electricity and chemical management. • Vegetation management. • Site security. • Ignition source control, including hot works. • Infrastructure, equipment and vehicle maintenance. • Emergency management.	The proponent will develop an operational management plan which will include safe work procedures for the facility.

Table 9: Facility Operation

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
A BMP must be developed for the facility, in consultation with DFES, before development starts.	A BMP (or equivalent) shall be prepared to accompany the development application. Alternatively, this report can be updated to demonstrate that bushfire requirements have adequately been considered and addressed.
Undertake bushfire prevention and preparedness activities.	An Emergency Plan shall be prepared which will outline bushfire prevention and preparedness activities. In addition, bushfire prevention and preparedness activities will be undertaken in accordance with the local government Firebreak Notice.
Facility operators must undertake the following measures: - Grass must be maintained at or below 100mm in height. - Long grass and/or deep leaf litter must not be present in areas where heavy equipment will be working, during construction or operation. - Restrictions and guidance must be adhered to during days of high (and above) fire danger or Total Fire Ban days.	The setback areas around the development envelopes must remain cleared of vegetation and combustible materials.
Appropriate monitoring for facility infrastructure must be provided to ensure that any shorts, faults or equipment failures with the potential to ignite or propagate fire are rapidly identified and controlled.	The facility will be subject to routine monitoring to identify any shorts, faults or equipment failures. The monitoring regime will be detailed in the operational management plan.
Inspection, maintenance and any required repair activities must be conducted for all infrastructure, equipment and vehicles at the facility. Maintenance must be in line with any relevant Australian Standards and manufacturers requirements.	Inspection, maintenance and repairs will be undertaken in accordance with the relevant Australian Standards and manufacturers requirements.

Table 10: Emergency Planning

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
An Emergency Plan must be developed specific to the facility before the development starts.	An emergency plan will be prepared and approved prior to operation of the development.
The Emergency Plan should be developed in accordance with AS 3745-2010: Planning for emergencies in facilities and include the following: - Emergency prevention, preparedness and mitigation activities. - Activities for preparing for emergencies. - Control and coordination arrangements for emergency response (e.g. Evacuation procedures, shelter-in-place arrangements, emergency assembly areas and emergency response procedures).	The emergency plan will be developed in accordance with AS 3745-2010 and any other relevant guidelines.

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
- The agreed roles and responsibilities of on-site personnel (e.g. equipment isolation, fire brigade liaison, evacuation management, shelter-in-place management, if applicable). The Emergency Plan for a solar facility should also include: - Emergency procedures for isolation and shutdown where solar panels and/or related infrastructure are involved in fire. - Emergency procedures for fires within the vicinity of solar energy facilities. - Specifications for safe operating conditions for temperature, and the hazards related to electricity generation at the facility.	The emergency plan will be prepared in consultation with the relevant experts, taking into consideration the hazards identified in the risk assessment.

Table 11: Provision of Emergency Information

CFA Design Guidelines Requirements (Adapted to WA)	Assessment
An Emergency Information Book must be developed and available to emergency responders. Emergency Information Books must be located in Emergency Information Containers, provided at each vehicle entrance.	The proponent will be responsible for preparing emergency information which are to be provided at the main entrance to the BESS facility.

3.2 Habitable Buildings

3.2.1 Bushfire Assessment Outcomes

Method 1 BAL assessments have been completed for the accommodation camp, site office and O&M building development envelopes to inform appropriate siting of future habitable buildings in areas that achieve a radiant heat impact not exceeding 29kW/m² (BAL-29).

The bushfire assessments are provided in Figure 9 and Figure 10 with the applicable BAL-29 setbacks detailed in Table 12.

Table 12: Accommodation Camp, Site Office and O&M Building BAL Setbacks

Development Envelopes	Vegetation classification	Effective Slope	29kW/m ² separation distance
Accommodation Camp, Site Office and O&M Building	Class G Grassland	Downslope >0-5 degrees	9 m
	Class G Grassland	Upslope / flat land	8 m

Based on the disturbance footprint shown on Appendix A, no setbacks will apply given the accommodation camp, site office and O&M building development envelopes will be entirely BAL-29 or below.

3.2.2 Recommendations

The accommodation camp, site office and O&M buildings have been assessed against the Bushfire Protection Criteria of the Guidelines which is considered most relevant. This includes:

- Bushfire Protection Criteria 6 (residential development) for the accommodation camp.
- Bushfire Protection Criteria 7 (commercial and industrial development) for the site office and O&M buildings.

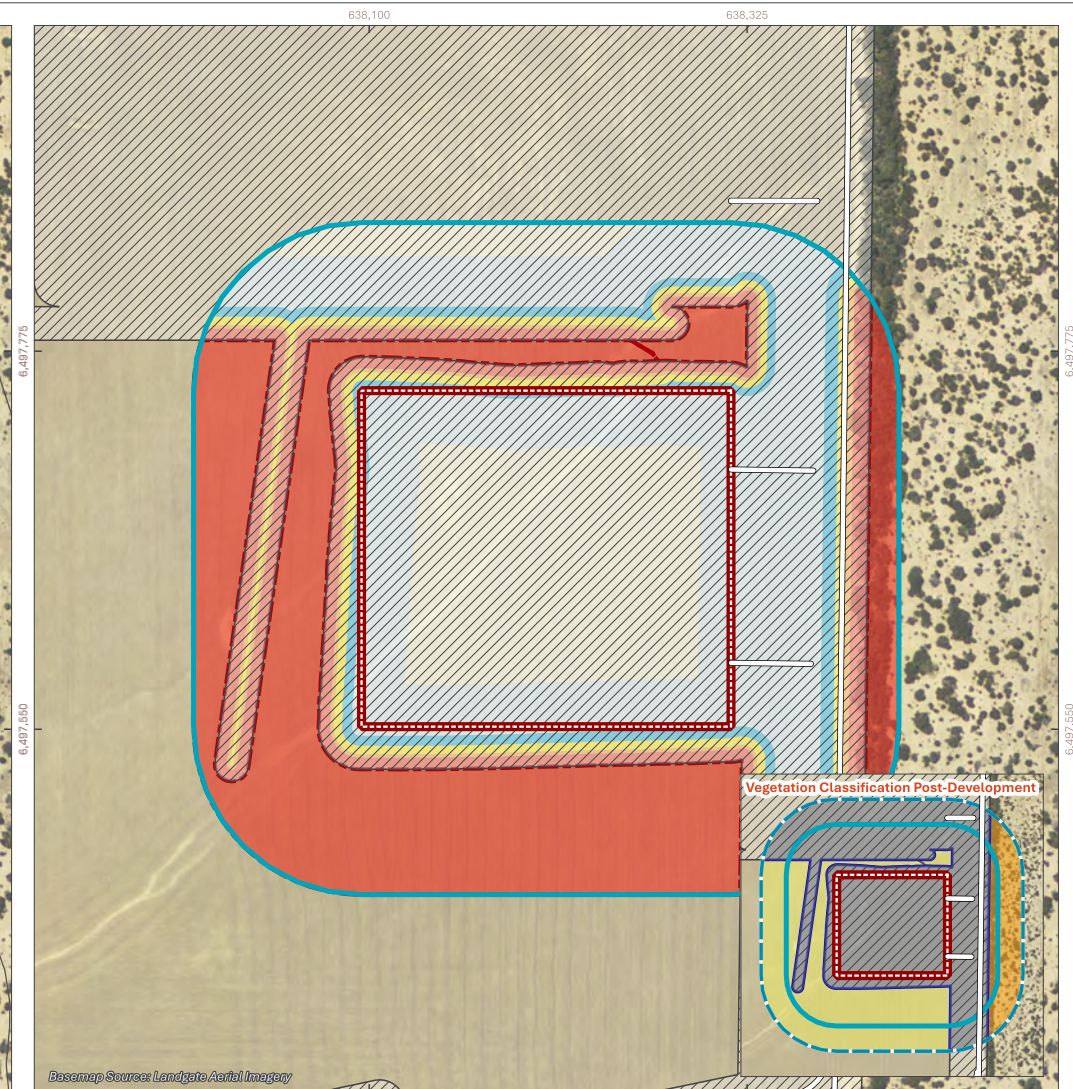
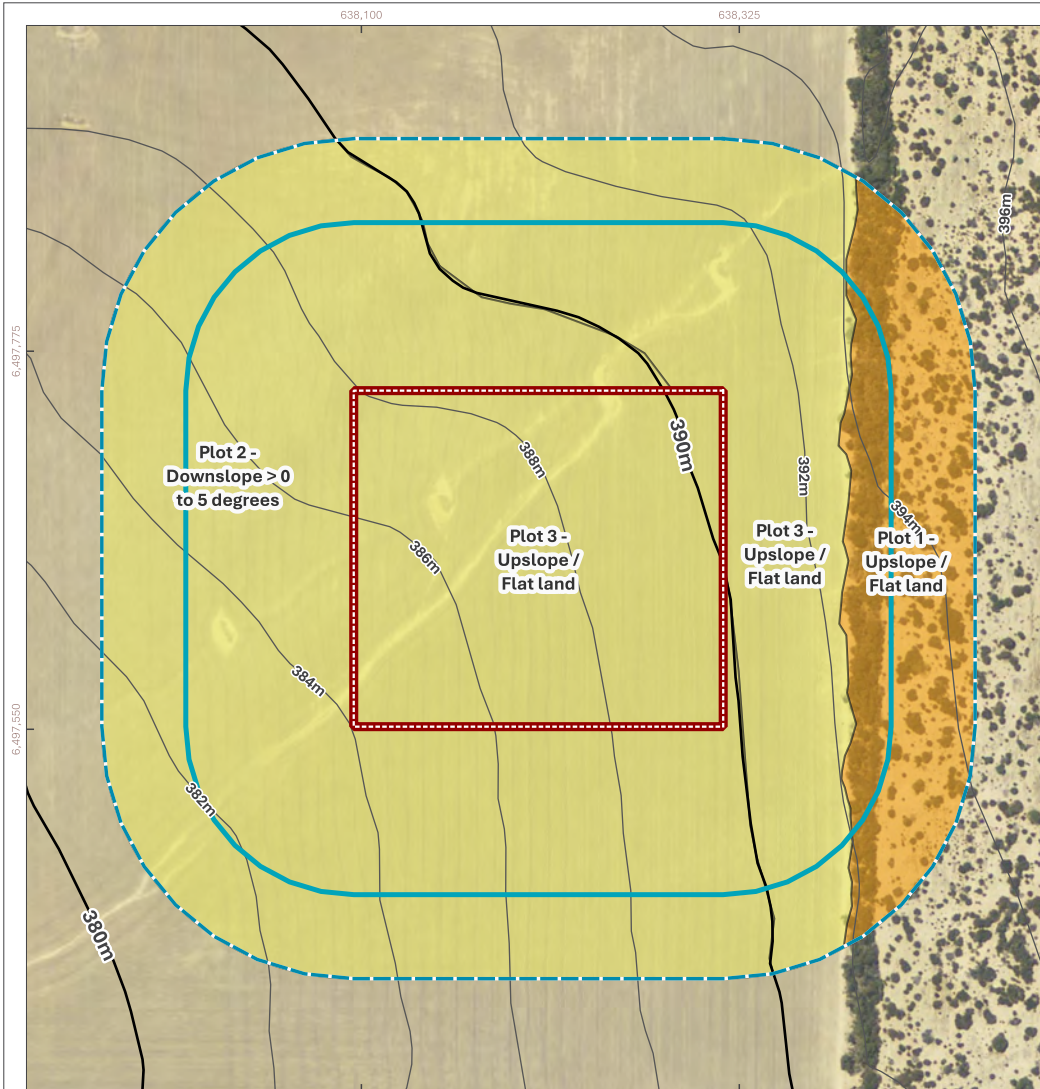
Table 13 outlines the bushfire management requirements that apply to the proposed habitable buildings. The assessment has been based on the development envelopes given the layout of individual buildings is yet to be determined.

Table 13: Accommodation Camp, Site Office and O&M Building - Bushfire Requirements

Criteria	Applicable Buildings	Bushfire Management Requirements	Assessment
Siting of Buildings	Accommodation Camp	Habitable buildings are to be located in an area that	The development envelopes for the accommodation camp, site office and O&M

Criteria	Applicable Buildings	Bushfire Management Requirements	Assessment
	Site Office O&M Building	achieves a radiant heat impact not exceeding 29kW/m ² (BAL-29).	building can accommodate habitable buildings in areas subject to BAL-29 or below. This will be achieved by adopting the BAL-29 setbacks detailed in Table 12 and shown on Figure 9 and Figure 10.
Asset Protection Zones	Accommodation Camp Site Office O&M Building	Habitable buildings are to be surrounded by an APZ to ensure the radiant heat impact does not exceed 29kW/m ² (BAL-29). The APZ shall be established and maintained in accordance with the Asset Protection Zone Technical Requirements in Appendix F.	Considering the development envelopes are currently vegetated, the setback areas will need to be maintained as an APZ. Retained vegetation and proposed landscaping within the setback area must be maintained in accordance with the Asset Protection Zone technical requirements in Appendix F. Alternatively, APZs would not be required if the entire development envelope is cleared and remains non-vegetated (i.e. gravel, crushed limestone, bitumen, etc.).
Clearing of Native Vegetation	Accommodation Camp Site Office O&M Building	The development avoids, or where unavoidable, minimises the clearing of native vegetation.	The development envelopes contain paddock grassland. As such, it is unlikely that any native vegetation will require clearing to facilitate construction of the accommodation camp, site office and O&M buildings.
Storage of hazardous, flammable or combustible materials	O&M Building	Hazardous, flammable or combustible materials must be stored in a non-combustible container or building within an area subject to a radiant heat impact not exceeding 29kW/m ² (BAL-29).	The development envelope for the O&M building can accommodate the storage of hazardous, flammable or combustible materials in areas subject to BAL-29 or below. This will be achieved by adopting the setbacks detailed in Table 12 and shown on Figure 10.
Internal Access Road	Accommodation Camp Site Office O&M Building	Private driveways and access roads shall meet the following: - Requirements under Column 5 in Appendix E. - Minimum width of 4m with passing bays every 200m. Passing bays shall be 20m in length with a combined width of 6m with the driveway (i.e. passing bays shall be 2m wide). Alternatively, the roads can be 6m in width for two-way access which avoids the need for passing bays. - Turnaround areas within 30m of habitable buildings for a Type 3.4 fire appliance vehicle. Turnaround areas	There is insufficient detail currently available to determine whether the proposed access roads comply with the Guidelines. However, the internal roads providing access to the accommodation camp, site office and O&M buildings should be designed to meet the following requirements: - Minimum 4m trafficable width with passing bays every 200m or a minimum 6m trafficable width for two-way access. - Minimum weight capacity of 15 tonnes. - Maximum grade 1:10 for unsealed roads or 1:7 for sealed roads. - Minimum 8.5m inner radius of road curves. - Turnaround area for a type 3.4 fire appliance vehicle within 30m of habitable

Criteria	Applicable Buildings	Bushfire Management Requirements	Assessment
		shall be in accordance with the design requirements in Appendix E.	buildings. Design options for turnaround areas are provided in Appendix E.
Water Supply	Accommodation Camp Site Office O&M Building	Dedicated water supply for firefighting purposes shall be provided in non-reticulated water areas. This shall be stored in a non-combustible tank with steel camlock, fittings and water supply pipes. The capacity of the fire water tanks shall be calculated using the following ratios: • 10,000 litres per habitable building associated with the accommodation camp (residential development). • 10,000 litres per 1,500m² of floor area for the site office and O&M buildings up to a maximum 50,000 litres (commercial and industrial development).	There is insufficient detail currently available to determine the bushfire water requirements for the accommodation camp, site office and O&M buildings. However, given the proposed habitable buildings are not bushfire prone and fire water tanks will be required for the other components of the wind farm, a non-combustible water tank with a minimum 50,00 litres for the accommodation camp and 10,000 litres for the site office and O&M buildings is considered sufficient.



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0 30 60 90 120 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: 1:4,500 PROJECT NUMBER: A25.368

DRAWN BY / REVIEWED BY: SM / DW 17/8/2026

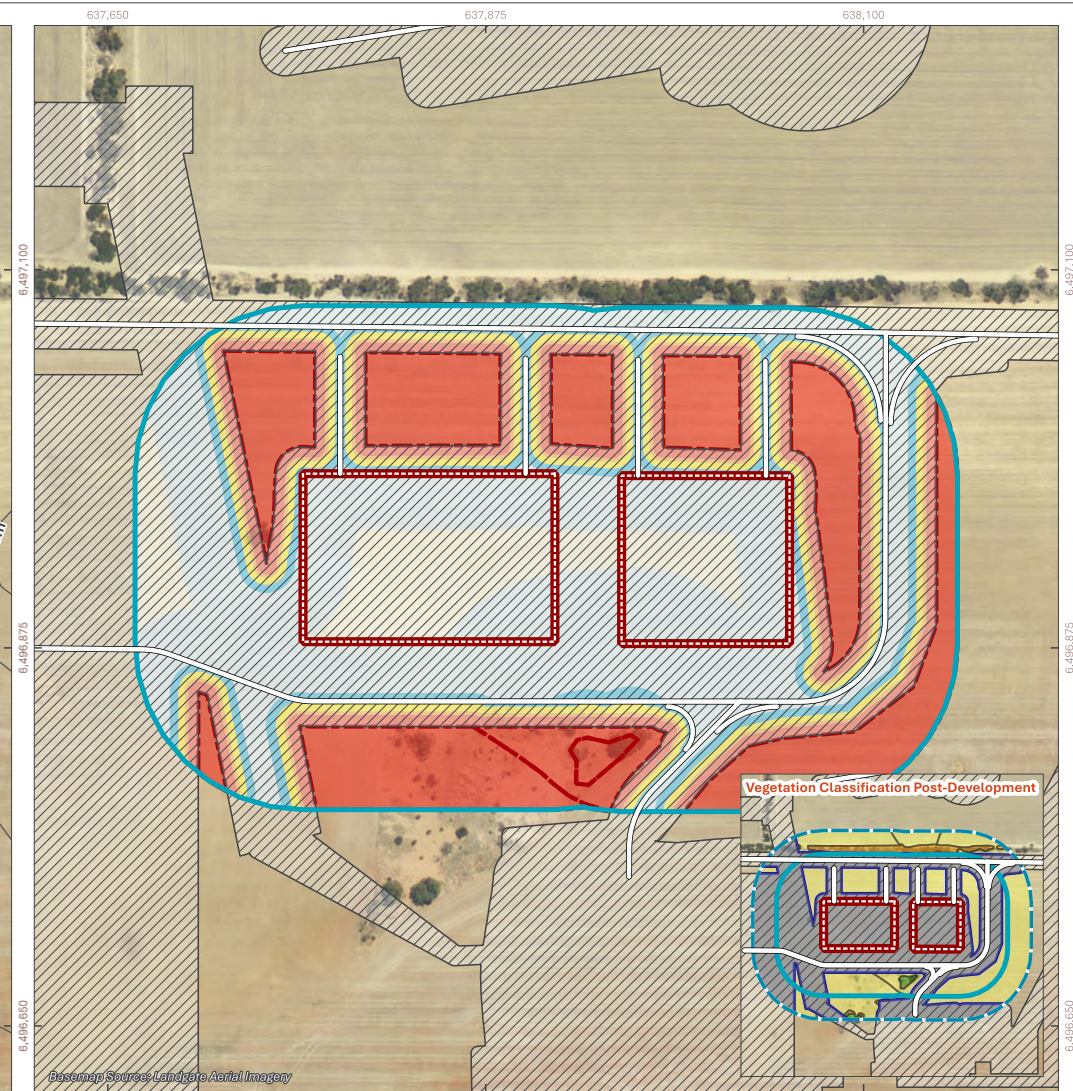
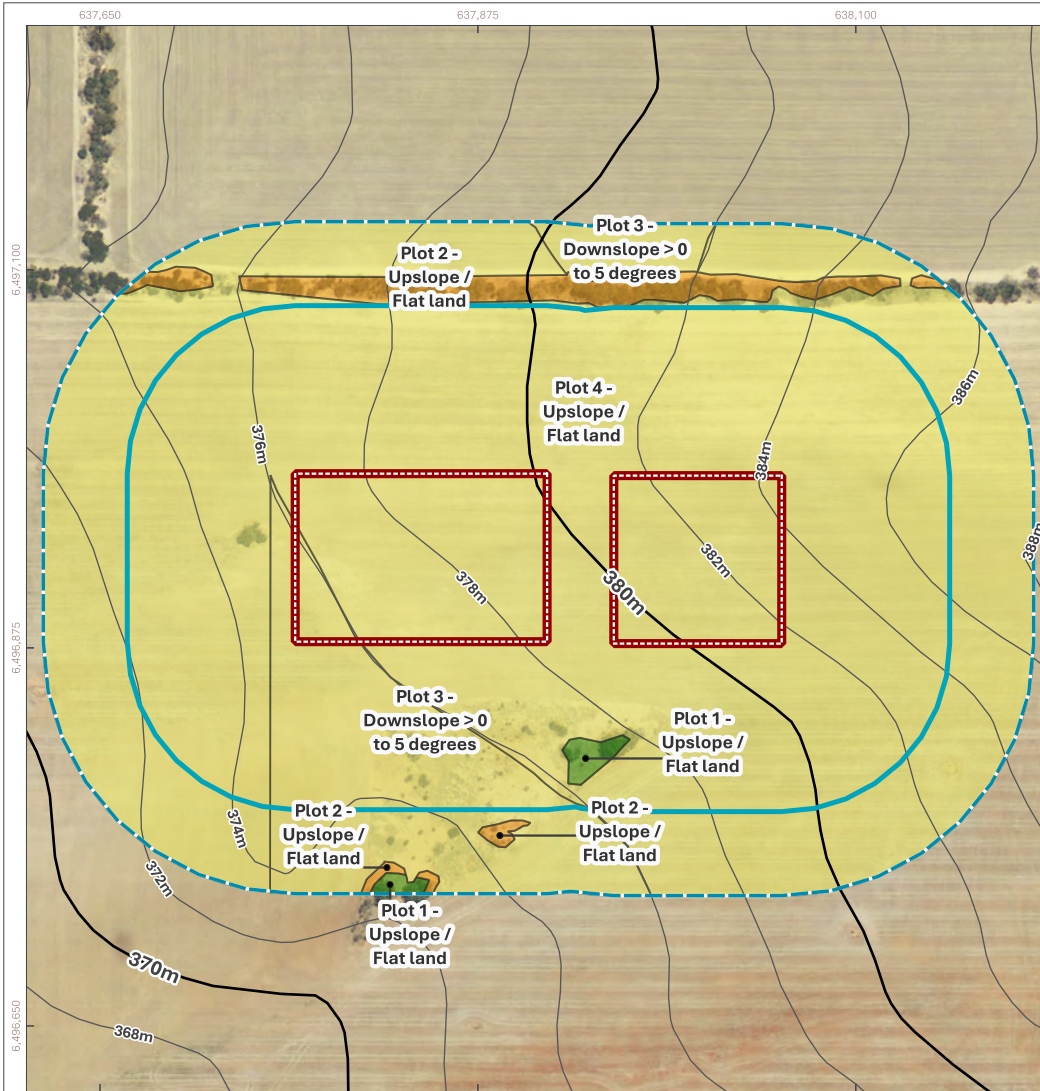
Figure 9: Bushfire Assessment - Camp Accommodation

- Building Site
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - Indicative Footprint

- Vegetation Classification**
- Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



terravias

0 30 60 90 120 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: 1:4,500 PROJECT NUMBER: A25.368

DRAWN BY: SM / DW REVIEWED BY: 17/8/2026

Figure 10: Bushfire Assessment - O&M Building and Site Office Compound

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- Building Site
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - Indicative Footprint

- Vegetation Classification**
- Class B - Woodland
 - Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW

3.3 Wind Turbine Generators

3.3.1 Bushfire Assessment Outcomes

Method 1 BAL assessments have been completed for the WTGs to inform the extent of asset protection zones required to achieve a radiant heat impact not exceeding 29kW/m² (BAL-29).

The bushfire assessments for the WTGs are provided in Appendix G with the BAL-29 separation distances detailed in Table 14. Considering all WTGs are surrounded by Class G Grassland which is either upslope or downslope (0-5 degrees), a generic APZ of 10m has been applied to the bushfire assessments.

Table 14: Wind Turbine Generators - Asset Protection Zones

Assets	Vegetation classification	Effective Slope	29kW/m ² separation distance (APZ)
Wind Turbine Generators	Class G Grassland	Downslope >0-5 degrees	9 m
	Class G Grassland	Upslope / flat land	8 m

Based on the disturbance footprint shown on Appendix A, no setbacks will apply given all WTGs will be entirely BAL-29 or below.

3.3.2 Recommendations

The WTGs and associated infrastructure have been assessed against Element 7 - Natural Hazards of the Draft RE Code and Guidelines. The assessment and compliance comments are contained in Table 15.

Table 15: Assessment Against Wind Farm Element 7 - Natural Hazards

Draft RE Code and Guidelines Requirements	Assessment
Wind turbines and associated infrastructure (excluding access tracks) are sited: - Outside bushfire prone areas where possible; or - Within bushfire prone areas where the pre-development radiant heat impact does not exceed BAL-29 (29 kW/m²), as shown in pre-development BAL contour mapping; or - where (a) or (b) cannot be achieved, with asset protection zones (i.e. low fire fuel areas) established around wind turbines and associated infrastructure to reduce the post-development radiant heat impact to BAL-29 or below, while avoiding or minimising native vegetation clearing and ensuring that any additional landscaping or revegetation does not contribute to an unacceptable fire risk.	All WTGs are sited outside of bushfire prone areas, as depicted in Figures 2 - 6. In addition, all WTGs shall be surrounded by a 10m APZ to ensure the radiant heat impact does not exceeding 29kW/m² (BAL-29). The APZ shall be maintained in accordance with the Asset Protection Zone technical requirements in Appendix F.
Wind turbines and associated infrastructure are spaced apart to: reduce the risk of fire spreading between components, considering radiant heat flux as a potential ignition source; and	All WTGs have at least 300 m separation to other WTGs.

Draft RE Code and Guidelines Requirements	Assessment
b. enable safe and effective aerial firefighting operations with a minimum separation of 300 metres between turbines. Wind turbines and associated infrastructure incorporate features that minimise ignition risk and support emergency response, including: - fire and lightning detection, power disconnection, and independent shutdown systems that can operate independently of local communications during an emergency; - non-combustible or fire-resistant materials in construction; - aviation obstacle lighting; - safe storage of hazardous, flammable and/or combustible materials consistent with Planning for Bushfire Guidelines (WAPC, 2024), specifically Bushfire Protection Criteria 7: Development - Commercial and industrial A2.4 Storage of hazardous, flammable and/or combustible materials.	Additional bushfire mitigation measures will be considered and implemented at detailed design stage, which will include measures such as power disconnection, fire and lightning detection, aviation obstacle lighting, amongst other items.
Wind farms include vehicular access enabling efficient, safe and reliable emergency response and evacuation, consistent with the Planning for Bushfire Guidelines (WAPC, 2024). This includes: - at least two ingress/egress points, preferably from two different public roads, and for each part of the development site where the site is divided by a public road(s). - internal access tracks that: - have suitable gradients, vertical clearances and all-weather surfaces; - provide a minimum four-metre trafficable width to each turbine and key infrastructure components such as substations and control offices; - include passing bays at least every 600 metres, with a minimum size of 20 metres long and six metres wide; and - provide adequate turn-around areas for emergency vehicle manoeuvring.	Multiple access points are available into project area and each area containing WTGs. There is insufficient detail currently available to determine whether the proposed access roads comply with the RE Code and Guidelines. However, the internal roads providing access to the WTGs should be designed to meet the following requirements: - Minimum 4m trafficable width with passing bays every 600m or a minimum 6m trafficable width for two-way access. - Where access roads terminate at a dead-end, suitable turnaround points will be provided in accordance with the design requirements in Appendix E.
Wind farms provide sufficient, accessible water supply and firefighting infrastructure. The number, size and locations of water tanks is to be determined in consultation with the Department of Fire and Emergency Services and local brigade, and include at a minimum: - one 45,000-litre static water tank at each property entrance from a public road; - one additional 45,000-litre static water tank within the development site; - water tank fittings compliant with relevant Planning for Bushfire Guidelines (WAPC, 2024) standards; and - a hardstand at each tank for emergency vehicles.	The following water tanks should be provided: - Eight (8) x 45,000 litre static water tanks with tanks located strategically throughout the project area at key entry points. - One (1) additional 45,000 litre static water tank within the project area. Each tank shall be non-combustible with a steel camlock, fittings and water supply pipes. Each tank will be accompanied by a hardstand area, the exact locations of which are to be confirmed at the detailed design stage.

Draft RE Code and Guidelines Requirements	Assessment
Wind farm operations support emergency response by: - maintaining firebreaks, asset protection zones, access tracks, water supply, hardstands and fire equipment; and - enacting emergency procedures, such as turbine shutdown, blade repositioning, power disconnection, activation of obstacle lighting to support aerial firefighting, and facilitating emergency vehicle and water access.	Operation and management plans will be created prior to occupation and implemented during operation of the wind farm.
Any new habitable building associated with the wind farm, located wholly or partly within a bushfire prone area, is sited, designed and constructed in accordance with State Planning Policy (SPP) 3.7 Bushfire (WAPC, 2024) and the Planning for Bushfire Guidelines (WAPC, 2024).	Habitable buildings have been assessed against SPP 3.7 and the Guidelines under Section 3.2 above.

4. Additional Considerations

4.1.1 Additional Documentation

The Draft RE Code and Guideline and the CFA Design Guidelines recommends an Emergency Management Plan (EMP) be prepared as a condition of development approval. The EMP should identify the actions to be undertaken in the event of a natural hazard emergency (including structural incidents and bushfire). It is recommended an EMP is prepared in accordance with the *Bushfire Emergency Plan Manual* (WAPC, 2024c).

In addition, the CFA Design Guidelines also recommends a Risk Management Plan (RMP) be prepared to outline risk management process and its outcomes, including site specific hazards/risks, their analysis, control measures, and the monitoring and review process. The RMP is intended to inform the detailed design process of the facility.

Recent renewable energy projects have been approved by the Development Assessment Panel (DAP) with conditions requiring the preparation of a EMP and RMP. It is likely that the same approach will be applied to this project.

4.1.2 Accommodation Camp

The *National Construction Code* (NCC; ABCB, 2026) includes bushfire construction requirements for Class 1, 2, 3 buildings and associated 10a buildings in bushfire prone areas. The level of bushfire construction determined through the preparation of a BAL Assessment. While this report includes a BAL assessment for the accommodation camp, there are no bushfire construction requirements that would apply to the accommodation buildings given they are not within a bushfire prone area.

4.1.3 Transmission Lines

There are no requirements relating to transmission lines under SPP 3.7, the draft RE Code and Guidelines or the CFA Guidelines, other than that vegetation management within any electric line easement must ensure that falling trees would not impact the transmission lines, towers and associated infrastructure. In accordance with the *Guidelines for management of vegetation near power lines* (DMIRS, 2012), it is generally the responsibility of the Network Operator to control and manage vegetation within proximity of transmission lines.

4.1.4 Temporary Laydown Areas and Batching Plants

There are no requirements relating to temporary laydown areas and batching plants under SPP 3.7, the draft RE Code and Guidelines or the CFA Guidelines. However, it is recommended that any high-risk infrastructure temporarily stored within the laydown areas or the batching plant is surrounded by a 20m wide APZ.

5. Summary of Key Requirements

The key requirements from this assessment are summarised in Table 16. As previously identified, these requirements are considered best practice for renewable energy facilities which may be impacted by bushfire. However, they are not mandatory under the bushfire planning framework given no buildings, assets or infrastructure is designated as bushfire prone on the *Map of Bush Fire Prone Areas* (DFES, 2025).

Table 16: Summary of Key Requirements

No.	Bushfire management measure
Entire Facility	
1	Ensure all access roads provide a minimum trafficable width of 4m with passing bays or 6m in width for two-way access without the need for passing bays.
2	Provide a turnaround area for a Type 3.4 fire appliance vehicle where access roads terminate at a dead-end.
3	Develop an Emergency Management Plan.
4	Develop a Risk Management Plan.
5	Develop an Operations and Maintenance Plan (or similar).
BESS and Substation	
6	Ensure BESS and substation infrastructure are separated from classified vegetation to ensure the radiant heat impact to these built assets does not exceed 10kW/m². Based on the disturbance footprint, the following setbacks will apply: • 4.6m setback to the northern and eastern boundaries of the BESS development envelope. • 1.2m setback to the western and southern boundaries of the BESS development envelope. • 4m to the northern boundary of the substation development envelope.
7	Establish and maintain separation areas in accordance with the APZ technical requirements.
8	Provide a hydrant system in accordance with AS 2419.1-2021.
9	Provide a dedicated firefighting water tank within BESS development envelope with a minimum capacity of 576,000 litres.
10	Provide a dedicated firefighting water tank within substation development envelope with a minimum capacity of 432,000 litres.
11	Prepare an Emergency Management Plan in accordance with the Bushfire Emergency Plan Manual (WAPC, 2024c), as recommended by the Draft Code.
Accommodation Camp, Site Office and O&M Buildings	
12	Setback habitable buildings to ensure the radiant heat impact does not exceed 29kW/m ² (BAL-29). Based on the disturbance footprint, buildings can be located up to the edge of the development envelopes for the accommodation camp, site office and O&M building.
13	Provide a dedicated firefighting water tank within accommodation camp with a minimum capacity of 50,000 litres.
14	Provide a dedicated firefighting water tank adjacent site office and O&M building with a minimum capacity of 10,000 litres.

No.	Bushfire management measure
Wind Turbine Generators	
15	Establish and maintain 10m APZs around each WTG.
16	Provide dedicated firefighting water tanks at each entrance with a minimum capacity of 45,000 litres. Based on the current layout, a total of eight (8) tanks is considered appropriate given entry points are generally limited to eight (8) key locations along the public road network.
17	Provide a dedicated firefighting water tank within the project area with a minimum capacity of 45,000 litres.
18	Ensure designated firefighting water tanks are filled to their effective capacity year-round. Refill tanks immediately after use in a bushfire event (within 24 hours).
19	Maintain firebreaks in accordance with the Draft Code, CFA Guidelines and Shire of Merredin annual firebreak notice requirements.
20	Implement, update and maintain operations and management plans (including this BMP) as necessary, to support emergency bushfire response.

6. References

- Australian Building Codes Board (ABCB). (2026). *Building Code of Australia: Volume 2*. Commonwealth of Australia and the States and Territories of Australia.
- Country Fire Authority (CFA). (2023). *Design Guidelines and Model Requirements for Renewables Energy Facilities Version 4*. State of Victoria.
- Department of Mines, Industry Regulation and Safety (DMIRS). (2012). *Guidelines for the management of vegetation near power lines*. Government of Western Australia.
- Standards Australia (SA). (2018). *Construction of buildings in bushfire-prone areas (AS 3959: 2018)*. Western Australian Planning Commission (WAPC). (2024a). *State Planning Policy 3.7 Bushfire*. Government of Western Australia.
- Western Australian Planning Commission. (2025). *Draft renewable energy planning code*. Department of Planning, Lands and Heritage. <https://www.planning.wa.gov.au/draft-renewable-energy-planning-code>
- Western Australian Planning Commission (WAPC). (2024a). *State Planning Policy 3.7 Bushfire*. Government of Western Australia.
- Western Australian Planning Commission (WAPC). (2024b). *Planning for Bushfire Guidelines*. Government of Western Australia.
- Western Australian Planning Commission (WAPC). (2024c). *Bushfire Emergency Plan (BEP) Manual*. Government of Western Australia.

Datasets Used

- Department of Biodiversity, Conservation and Attractions (DBCA). (2017). *Ramsar Sites (DBCA-010)*. Retrieved on 01/05/2026 from <https://catalogue.data.wa.gov.au/dataset/ramsar-sites>.
- Department of Biodiversity, Conservation and Attractions (DBCA). (2025). *Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)*. Retrieved on 19/02/2026 from <https://catalogue.data.wa.gov.au/dataset/geomorphic-wetlands-swan-coastal-plain>.
- Department of Biodiversity, Conservation and Attractions (DBCA). (2022). *Threatened and Priority Flora (DBCA-036)*. Retrieved on 01/05/2026 from <https://catalogue.data.wa.gov.au/dataset/threatened-and-priority-flora>.
- Department of Biodiversity, Conservation and Attractions (DBCA). (2022). *Threatened and Priority Flora (DBCA-036)*. Retrieved on 09 February 2026 from <https://catalogue.data.wa.gov.au/dataset/threatened-and-priority-flora>.

Department of Biodiversity, Conservation and Attractions (DBCA). (2024). *Threatened Ecological Communities (DBCA-038)*. Retrieved on 01/05/2026 from <https://catalogue.data.wa.gov.au/dataset/threatened-ecological-communities>.

Department of Fire and Emergency Services (DFES). (2025). *Map of Bush Fire Prone Area Planning (OBRM-023)*. Retrieved on 01/05/2026 from: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/Pages/default.aspx>.

Department of Primary Industries and Regional Development (DPIRD). (2025). *Swan Coastal Plain and Perth-Peel Native Vegetation Extent 2024 (DWER-141)*. Retrieved on 01/05/2026 from <https://catalogue.data.wa.gov.au/dataset/native-vegetation-extent>.

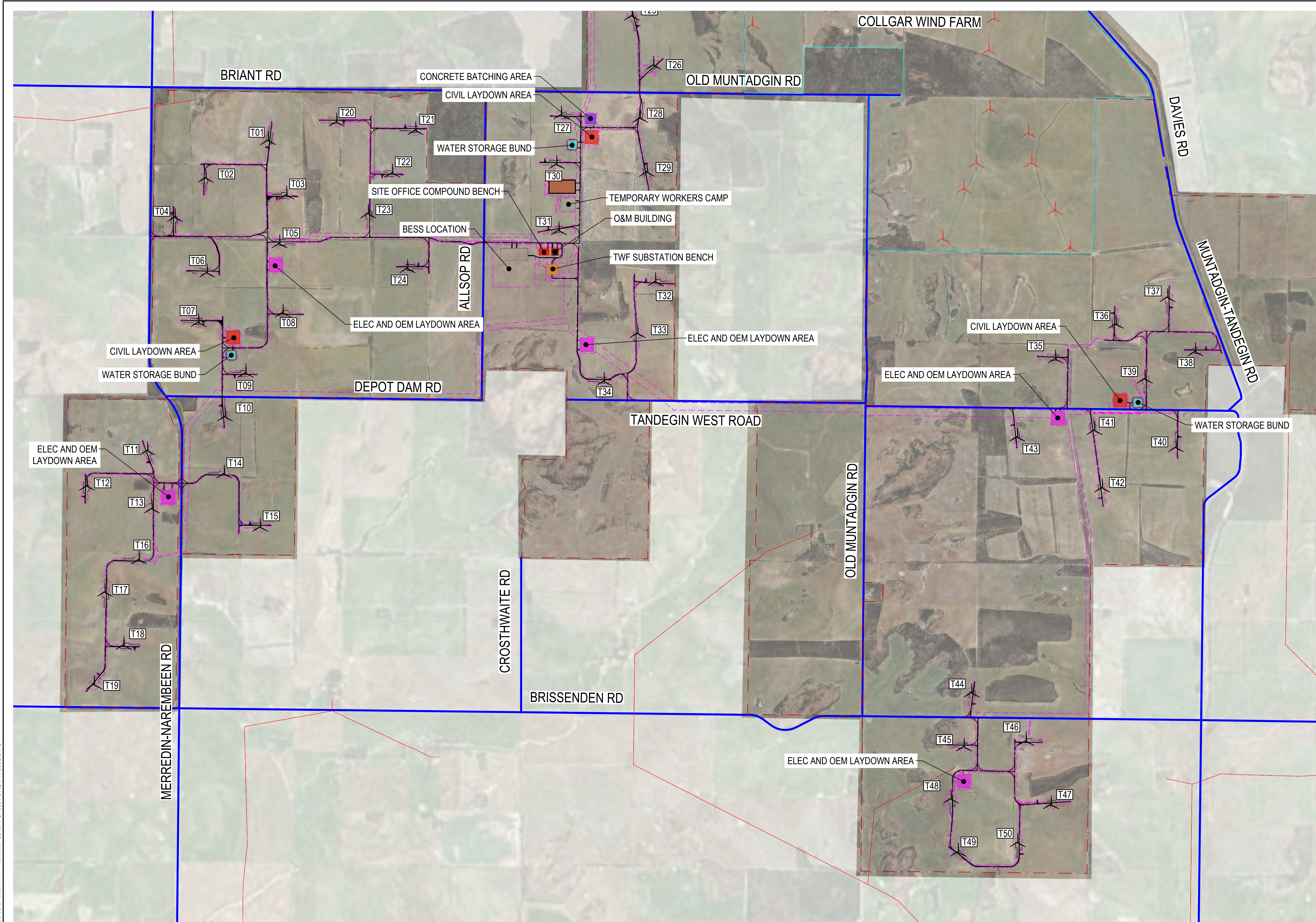
Department of Primary Industries and Regional Development (DPIRD). (2019). *2 metre contours (DPIRD-072)*. Retrieved on 01/05/2026 from <https://catalogue.data.wa.gov.au/dataset/dpird-2-metre-contours>.

Department of Planning, Lands and Heritage (DPLH). (2019). *Bush Forever Areas 2000 (DPLH-019)*. Retrieved on 01/05/2026 from <https://catalogue.data.wa.gov.au/dataset/bush-forever-areas-2000-dop-071>.

Department of Water and Environmental Regulation (DWER). (2025). *Clearing Regulations - Environmentally Sensitive Areas (DWER-046)*. Retrieved on 18/02/2026 from <https://catalogue.data.wa.gov.au/dataset/clearing-regulations-environmentally-sensitive-areas-dwer-046>.

Appendix A:

Development Layout Plans



SITE PLAN
1:30000

NOTE:
1. LOCATION OF LAYDOWN AREAS TO BE CONFIRMED BY THE
SELECTED TURBINE SUPPLIER DURING DETAILED DESIGN.

TURBINE LAYOUT

TURBINE ID	EASTING	NORTHING
T01	633667.344	6498619.584
T02	632723.000	6498051.000
T03	633946.000	6497795.000
T04	632257.569	6497454.942
T05	633840.000	6497058.000
T06	632743.662	6496616.275
T07	632614.026	6495865.751
T08	633891.093	6496011.266
T09	633329.091	6495100.000
T10	633015.062	6494436.143
T11	631843.000	6493924.000
T12	630926.941	6493388.106
T13	631907.487	6493043.303
T14	633002.000	6493575.000
T15	633548.950	6492767.167
T16	631713.959	6492273.033
T17	631197.000	6491782.000
T18	631482.000	6490979.000
T19	631035.000	6490382.000
T20	634702.639	6498900.704
T21	635899.000	6498772.000
T22	635547.000	6498129.000
T23	635181.552	6497509.896
T24	635775.834	6496681.701
T25	639171.301	6500503.688
T26	639498.925	6499759.141
T27	638103.000	6499007.000
T28	639297.866	6498957.091
T29	639399.802	6498140.271
T30	638032.074	6498259.223
T31	638065.840	6497257.734
T32	639527.816	6496483.277
T33	639258.000	6495699.000
T34	638749.649	6494973.782
T35	645580.280	6495312.376
T36	646494.921	6495839.789
T37	647275.638	6496244.055
T38	647697.985	6495422.078
T39	646932.162	6495008.829
T40	647402.608	6493970.926
T41	646170.596	6494230.720
T42	646288.272	6493361.428
T43	645002.000	6494131.000
T44	644312.254	6490257.945
T45	644196.508	6489440.736
T46	645134.900	6489529.434
T47	645513.521	6488566.528
T48	643998.854	6488652.006
T49	644107.332	6487849.067
T50	645008.000	6487991.000

LEGEND

- T01 PROPOSED TURBINE LOCATION
- PROJECT BOUNDARY
- NEW ACCESS ROADS
- DISTURBANCE FOOTPRINT
- EXISTING ROADS
- CWF BOUNDARY
- EXISTING ELECTRICAL
- LGA TOWNSITES
- EXISTING TURBINE

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REFERENCE DRAWINGS				REFERENCE MODELS				
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				531071-SP0001-MDA-PW-0024				
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A	2026-07-23	ISSUED FOR REVIEW		A	T.P	H.P	L.K	O.B
B	2026-08-07	ISSUED FOR REVIEW		B	N.C	H.P	L.K	O.B

300 0 600 1200 m
1:30000

PREPARED BY
aurecon
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CERTIFICATION No. CERTIFIER DATE

CLIENT
COLLGAR RENEWABLES

CLIENT DOCUMENT NUMBER
TWF-PG2010-000-ENG-LAY-0001-00

REV

Coordinate system
MGA50 GDA2020
Height datum
AHD

PRINT ALL COPIES
IN COLOUR

CONSTRUCTION STATUS
NOT FOR CONSTRUCTION

DRAWN BY
T.PHAM

DESIGNED BY
H.PACKER

STATUS
CONCEPT DESIGN AND PLANNING

DOCUMENT STATE
PUBLISHED

PROJECT
**TANDEGIN WIND FARM
ENGINEERING CONTRACTOR**

TITLE
**TANDEGIN WIND FARM
PROJECT LAYOUT
SHEET 1**

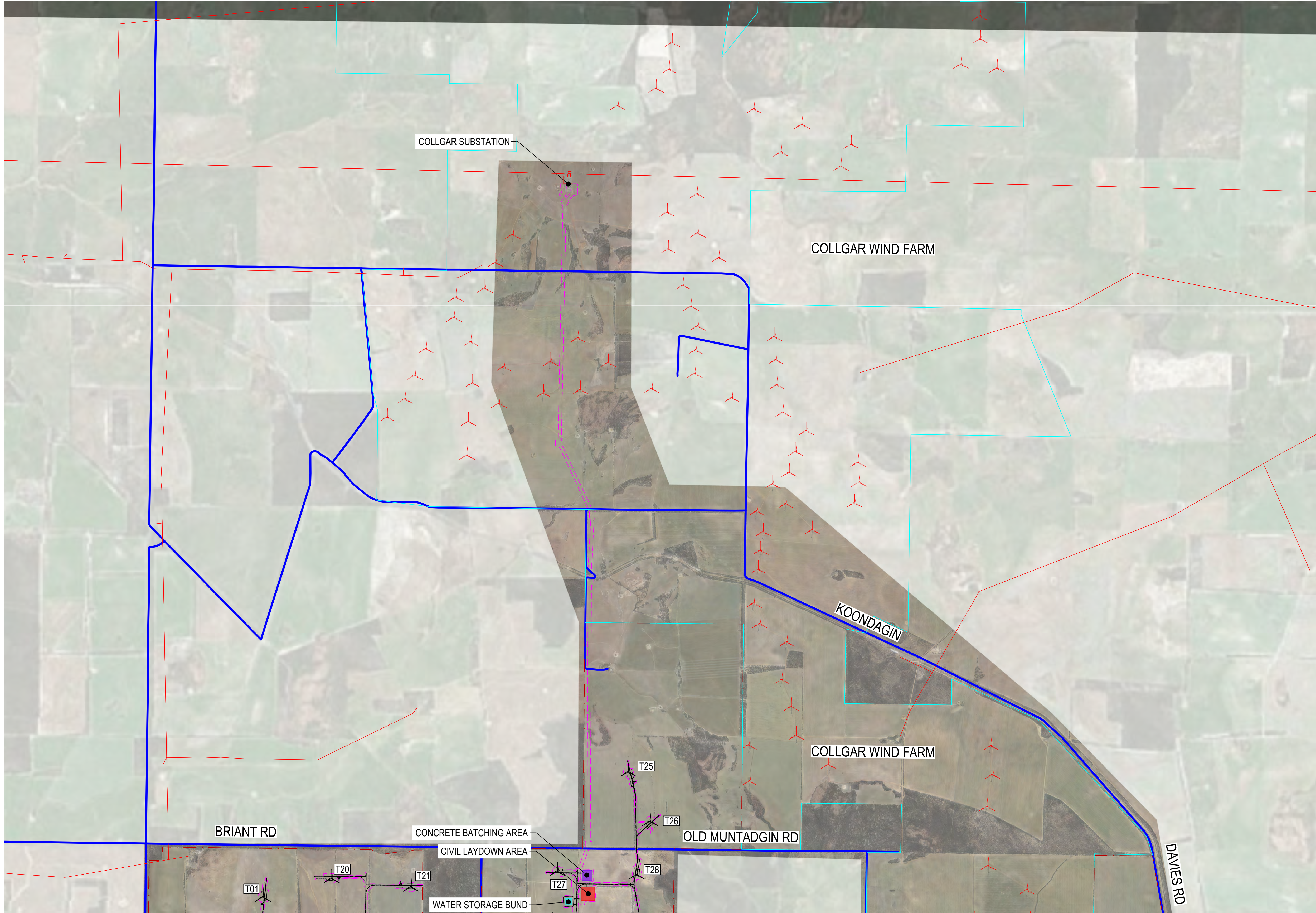
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SCALE
AS SHOWN

SIZE
A1

REFERENCE No.
DRG-PW-0006

REV
B



NOTE:
1. LOCATION OF LAYDOWN AREAS TO BE CONFIRMED BY THE
SELECTED TURBINE SUPPLIER DURING DETAILED DESIGN.

- LEGEND
- PROPOSED TURBINE LOCATION
 - PROJECT BOUNDARY
 - NEW ACCESS ROADS
 - DISTURBANCE FOOTPRINT
 - EXISTING ROADS
 - CWF BOUNDARY
 - EXISTING ELECTRICAL
 - LGA TOWNSITES
 - EXISTING TURBINE

SITE PLAN
1:30000

REFERENCE DRAWINGS				REFERENCE MODELS				
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REV	DATE	REVISION DETAILS		REV	DRAWN	DESIGNED	VERIFIED	APPROVED
A	2026-07-23	ISSUED FOR REVIEW		A	T.P	H.P	L.K	O.B
B	2026-08-07	ISSUED FOR REVIEW		B	NC.	H.P	L.K	O.B



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CERTIFICATION No. CERTIFIER DATE

CLIENT

COLLGAR
RENEWABLES

CLIENT DOCUMENT NUMBER
TWF-PG2010-000-ENG-LAY-0001-00

REV

All written dimensions
take precedence over
scaled dimensions.



Coordinate system
MGA50 GDA2020
Height datum
AHD

PRINT ALL COPIES
IN COLOUR



CONSTRUCTION STATUS
**NOT FOR
CONSTRUCTION**

DRAWN BY
T.PHAM

DESIGNED BY
H.PACKER

STATUS
CONCEPT DESIGN AND
PLANNING

CODE
A2

DOCUMENT STATE
PUBLISHED

PROJECT
**TANDEGIN WIND FARM
ENGINEERING CONTRACTOR**

TITLE
**TANDEGIN WIND FARM
PROJECT LAYOUT
SHEET 2**

DOCUMENT CODE
531071-SP0001-DRG-PW-0007

SCALE
AS SHOWN

SIZE
A1

REFERENCE No.
DRG-PW-0007

REV
B

Appendix B:

Classified Vegetation Photos

Vegetation Classification / Exclusion:	Class A Forest
Description: Trees up to 30 m in height with a multi-tiered understory. Foliage cover exceeds 30% and understorey vegetation structure is multi-tiered. This is a conservative classification.	North ☉ 356°N (T) ● 31°38'58"S, 118°23'35"E ±3m ▲ 362m 
Vegetation Classification / Exclusion:	Class A Forest
Description: Trees up to 30 m in height with a multi-tiered understory. Foliage cover exceeds 30% and understorey vegetation structure is multi-tiered.	
Vegetation Classification / Exclusion:	Class B Woodland
Description: Trees up to 30 m in height with a grassy or bare understory. Foliage cover is <30% and understorey vegetation structure is multi-tiered.	

Vegetation Classification / Exclusion:	Class B Woodland
Description: Trees up to 30 m in height with a grassy or bare understorey. Foliage cover is <30% and understorey vegetation structure is multi-tiered.	
Vegetation Classification / Exclusion:	Class D Scrub
Description: Vegetation dominated by tall shrubs/small trees with an average height between 2 m-6 m.	
Vegetation Classification / Exclusion:	Class D Scrub
Description: Exclusion Vegetation dominated by tall shrubs/small trees with an average height between 2 m-6 m.	

Vegetation Classification / Exclusion:	Class D Scrub
Description: Vegetation dominated by tall shrubs/small trees with an average height between 2 m-6 m.	
Vegetation Classification / Exclusion:	Class D Scrub
Description: Vegetation dominated by tall shrubs/small trees with an average height between 2 m-6 m.	
Vegetation Classification / Exclusion:	Class G Grassland
Description: Vegetation dominated by exotic and planted grasses. Some trees are present in this plot, however these are sparse with isolated canopies (less than 10%).	South East ☀ 116°SE (T) ● 31°42'53"S, 118°22'55"E ±3m ▲ 357m  30 Mar 2026, 14:55:57

Vegetation Classification / Exclusion:	Class G Grassland
Description: Vegetation dominated by exotic and planted grasses. Some trees are present in this plot, however these are sparse with isolated canopies (less than 10%).	
Vegetation Classification / Exclusion:	Class G Grassland
Description: Vegetation dominated by exotic and planted grasses. Some trees are present in this plot, however these are sparse with isolated canopies (less than 10%).	
Vegetation Classification / Exclusion:	Class G Grassland
Description: Vegetation dominated by exotic and planted grasses. Some trees are present in this plot, however these are sparse with isolated canopies (less than 10%).	

Vegetation Classification / Exclusion:	Excluded - clause 2.2.3.2 (e)
Description: Tracks which are devoid of vegetation. This plot has been excluded under clause 2.2.3.2 (e) of AS 3959:2018.	
Vegetation Classification / Exclusion:	Excluded - clause 2.2.3.2 (e)
Description: Tracks which are devoid of vegetation. This plot has been excluded under clause 2.2.3.2 (e) of AS 3959:2018.	

Appendix C:

Method 2 BAL Calculations



Calculated April 28, 2026, 3:16 pm (MDc v.4.9)

Grassland (Upslope / Flat)

Minimum Distance Calculator - AS3959-2018 (Method 2)

Inputs		Outputs	
Grassland Fire Danger Index	110	Rate of spread	20.19 km/h
Vegetation Classification	Grassland	Flame length	8.16 m
Understorey fuel load	4.5 t/ha	Flame angle	54 ° , 64 ° , 73 ° , 78 ° , 80 ° & 85 °
Total fuel load	4.5 t/ha	Elevation of receiver	3.3 m, 3.67 m, 3.9 m, 3.99 m, 4.02 m & 4.06 m
Vegetation height	n/a	Fire intensity	46,945 kW/m
Effective slope	5 °	Transmissivity	0.885, 0.872, 0.854, 0.832, 0.82 & 0.748
Site slope	0 °	Viewfactor	0.5915, 0.4337, 0.2918, 0.1968, 0.1599 & 0.0438
Flame width	100 m	Minimum distance to < 40 kW/m²	6.8 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	9.3 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	13.8 m
Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m²	20.3 m
		Minimum distance to < 10 kW/m²	24.6 m

Rate of Spread - Noble et al. 1980

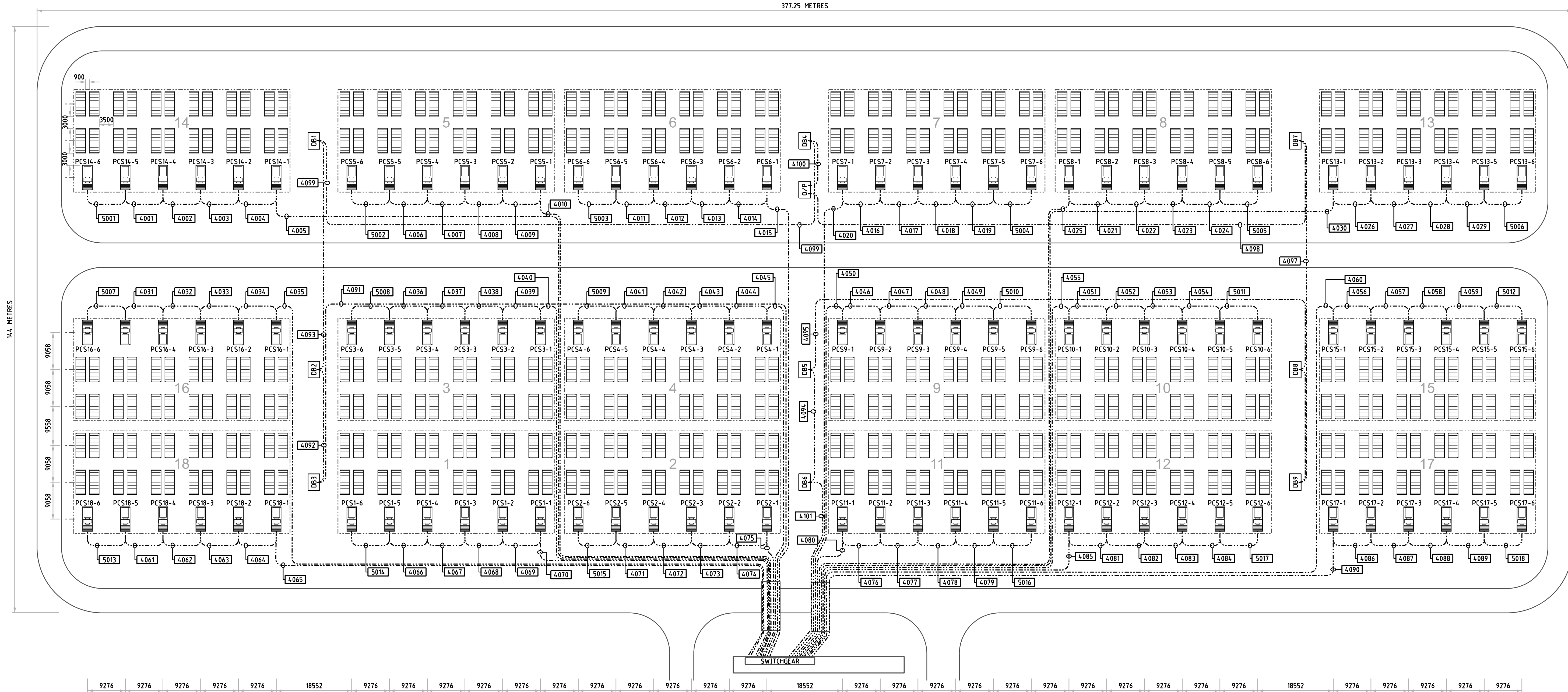
Flame length - Purton, 1982

Elevation of receiver - Douglas & Tan, 2005

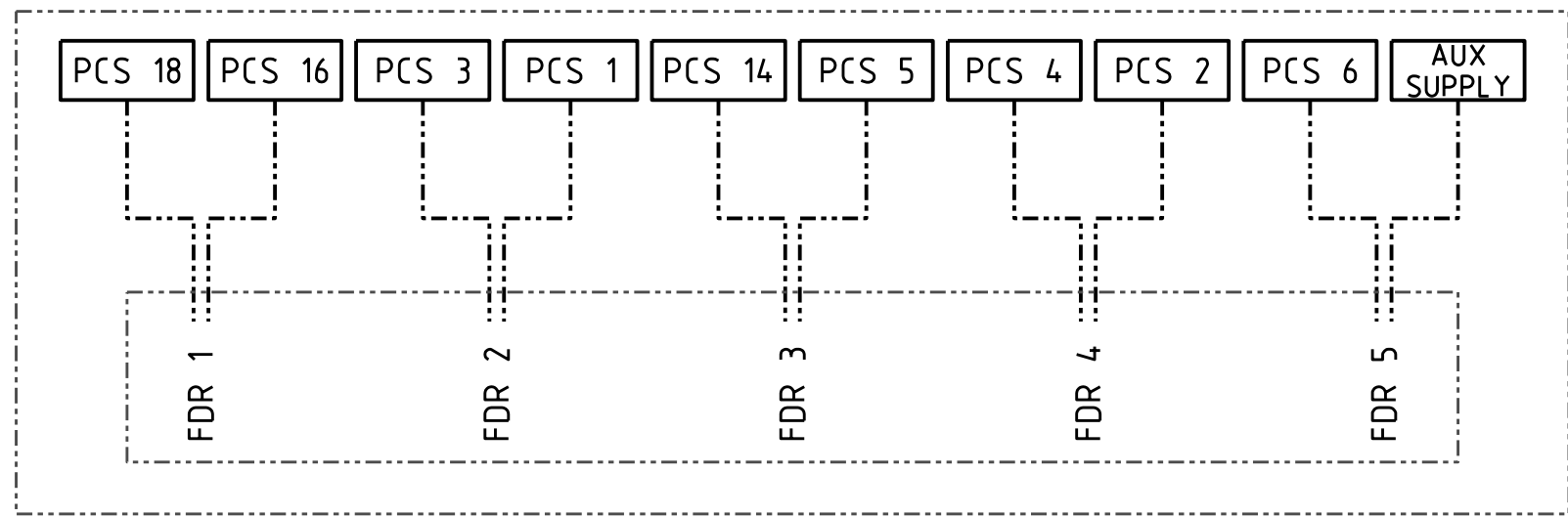
Flame angle - Douglas & Tan, 2005

Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

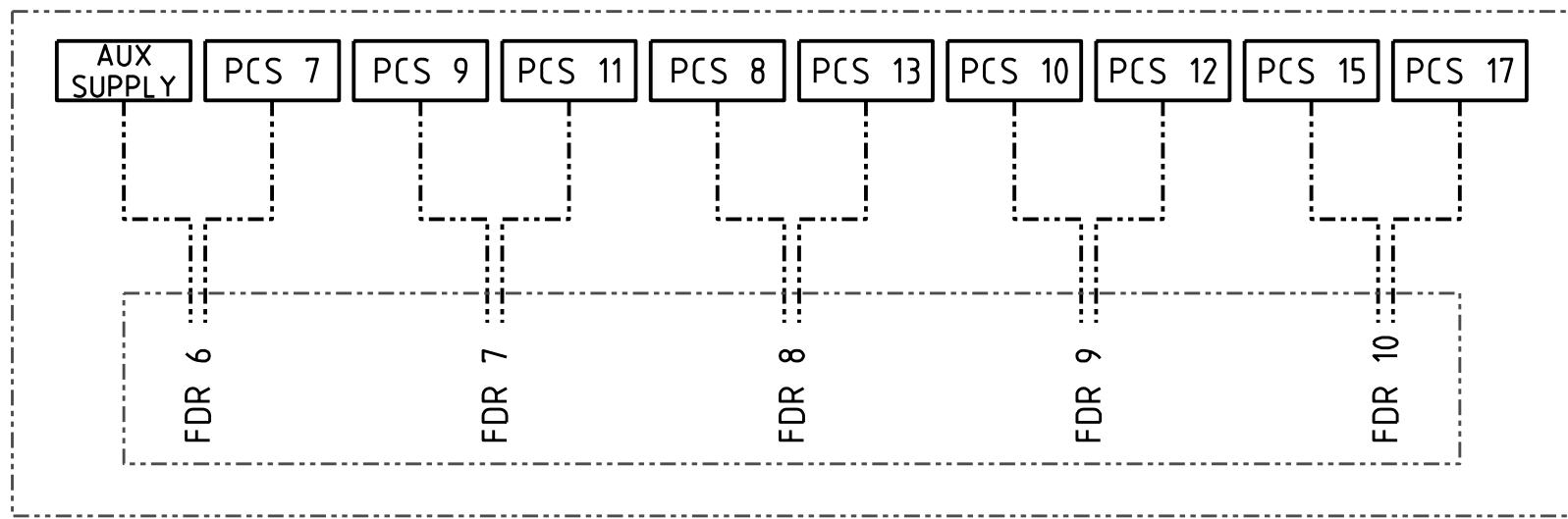
Appendix D: BESS and Substation Layout Plans



SUBSTATION
CONTINUED DRAWING 708119341-001-ELE-DRG-
BESS PLAN



BLOCK DIAGRAM 33kV SWBD 1



BLOCK DIAGRAM 33kV SWBD 2

Notes

Key to symbols
PCS - (6058 X 2438 X 2896H) SMA - MVPS 4600-S2 (3365 kVA)
BATTERY - (6058 X 2438 X 2896H) CATL
----- 33 kV CABLE
----- 415 V CABLE

Reference drawings
708119341-001-ELE-DRG-COLLGAR 2 SUBSTATION 220kV SLD 708119341-001-ELE-DRG-WF 33kV RETIC WIND FARM 33kV RETICULATION

Rev	Date	Drawn	Description	Ch'k'd	App'd
B	02.12.2024	BNB	ISSUED FOR REVIEW	DB	AM
A	14.11.2024	BNB	ISSUED FOR REVIEW	DB	AM

Status Stamp

NOT FOR CONSTRUCTION

M

MOTT
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Client

COLLGAR
RENEWABLES

Title

COLLGAR 2 WIND FARM AND BESS
PROJECT
BESS LAYOUT DRAWING

Designed	DB	-	Eng. Check	AC	-
Drawn	BNB	-	Coordination	-	-
Dwg. Check	TM	-	Approved	AM	-
MMD Project Number	-	Scale at A1 1:500			Security STD
Suitability Description	-				Suit. Code -
Drawing Number	708119341-001-ELE-DRG-BESS LAYOUT				Rev B

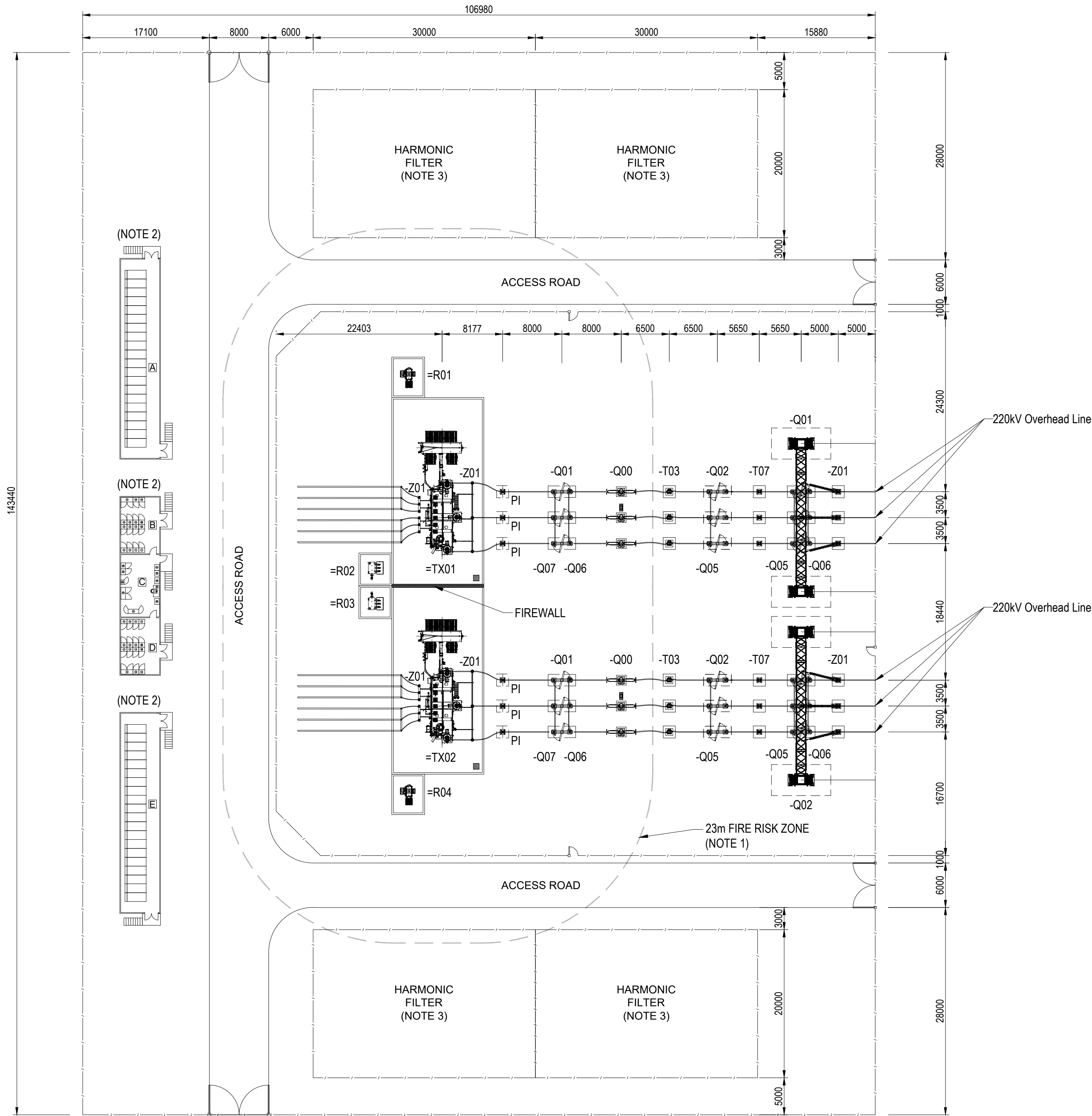
Plot Date: 2025-09-26 3:01 PM Filename: 528866-W00001-SKT-EL-0003.DWG

LEGEND:

———— SUBSTATION FENCE

NOTES:

- LAYOUT IS PRELIMINARY AND SHALL BE FINALISED DURING DETAIL DESIGN.
- SWITCHROOM DIMENSION IS PRELIMINARY AND SHALL BE FINALIZED DURING DETAIL DESIGN.
- HARMONIC FILTER SPACE IS INDICATIVE ONLY AND SHALL BE FINALIZED DURING DETAIL DESIGN.
- THE LOCATION OF ACCESS GATE(S) AND INTERNAL MATERIAL TRANSPORT ROAD IS PROVISIONAL AND MAY BE REVISED DURING DETAILED DESIGN BASED ON FINAL MICROSITING OF THE SUBSTATION.
- THIS LAYOUT IS BASED ON THE INITIALLY PROVIDED SINGLE LINE DIAGRAM. AT LATER STAGES, AN ASSESSMENT MUST BE PERFORMED TO CONSIDER EXPANSION AND REDUNDANCY REQUIREMENTS TO INCLUDE BUSBAR.
- WTG AND BESS WILL BE CONNECTED AT 33kV SWITCHGEAR A & B.



220/33 kV SUBSTATION LAYOUT
SCALE: 1:400

EQUIPMENT ID TABLE

=TX01 & =TX02	POWER TRANSFORMER
=R02 & =R03	NEUTRAL EARTHING TRANSFORMER
=R01 & =R04	NEUTRAL EARTHING / AUXILIARY TRANSFORMER
-Q00	CIRCUIT BREAKER
-Q01, -Q02	DISCONNECTOR
-Q05, -Q06, -Q07	EARTH SWITCH
-T03	CURRENT TRANSFORMER
-T07	VOLTAGE TRANSFORMER
-Z01	SURGE ARRESTER
PI	POST INSULATOR

ROOM SCHEDULE

ITEM	DESCRIPTION
A	33kV SWITCH ROOM 1
B	CONTROL ROOM 1
C	PLANT CONTROL ROOM
D	CONTROL ROOM 2
E	33kV SWITCH ROOM 2

DESIGN AND SAFETY CLEARANCES

NOMINAL VOLTAGE Un	HIGHEST VOLTAGE Um r.m.s.	RATED SHORT DURATION POWER FREQUENCY WITHSTAND VOLTAGE Ud r.m.s.	RATED LIGHTNING IMPULSE WITHSTAND VOLTAGE Up 1.2/50 µs (PEAK VALUE)	RATED SWITCHING IMPULSE WITHSTAND VOLTAGE Us PHASE-TO-EARTH 250/2500 µs (PEAK VALUE)	SHORT CIRCUIT WITHSTAND LEVEL kA	DESIGN CLEARANCES			GROUND SAFETY CLEARANCE mm
						PHASE-TO-EARTH CLEARANCE	PHASE-TO-PHASE CLEARANCE	NON-FLASHOVER DISTANCE	
kV r.m.s.	kV r.m.s.	kV r.m.s.	kV peak	kV peak		mm	mm	mm	mm
33	36	70	200		31.5/1sec	380	440	420	2440
220	245	395	950		50/1sec	1900	2185	2015	2440

REFERENCE DRAWINGS
708119341-001-ELE-DRG-COLLGAR 2 SINGLE LINE DIAGRAM

REFERENCE MODELS

REV	DATE	REVISION DETAILS	REV	DRAWN	DESIGNED	VERIFIED	APPROVED
A	2025-09-26	FINAL ISSUE	A	LD	DS	TB	TB

PREPARED BY

aurecon
www.aurecongroup.com

CLIENT

COLLGAR RENEWABLES

4 0 8 16m
1:400

All written dimensions take precedence over scaled dimensions.

Coordinate system

Height datum

PRINT ALL COPIES
IN COLOUR



CONSTRUCTION STATUS
NOT FOR CONSTRUCTION

DRAWN BY
L.DANG

DESIGNED BY
D.SUBEDI

STATUS
CONCEPT DESIGN

CODE
S5

DOCUMENT STATE
WORK IN PROGRESS

PROJECT
TANDEGIN WIND FARM

TITLE
220/33 kV SUBSTATION
GENERAL ARRANGEMENT

DOCUMENT CODE
528866-W00001-SKT-EL-0003

SCALE
1:400

SIZE
A1

REFERENCE No.

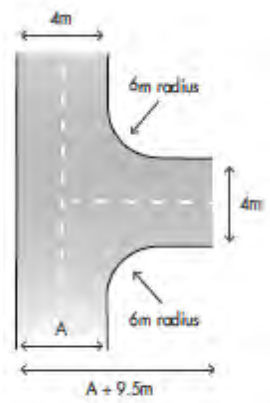
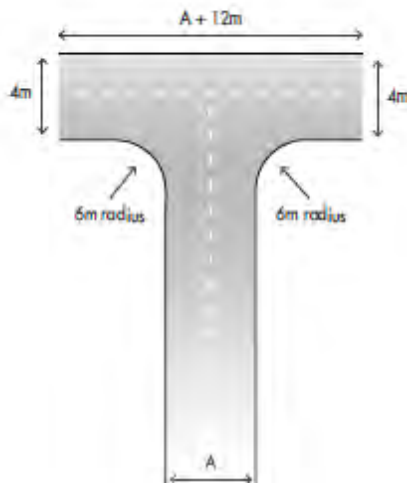
REV
A

Appendix E: Vehicle Access Technical Requirements

Technical requirements	Perimeter Roads		Public Roads		Emergency Access Way ³		Fire Service Access Route ³		Battle-Axe and Private Driveways ¹	
Map of Bush Fire Prone Areas Designation	Area 2	Area 1	Area 2	Area 1	Area 2	Area 1	Area 2	Area 1	Area 2	Area 1
Minimum horizontal clearance (m)	12	8	See note 5		10	6	10	6	6	
Minimum vertical clearance (m)	4.5									
Minimum weight capacity (t)	15									
Maximum grade unsealed road ²	See note 5		See note 5		1:10 (10% or 6 degrees)					
1:7 (14.3% or 8 degrees)										
1:10 (10% or 6 degrees)										
8.5										

ADDITIONAL NOTES

1. Driveways and battle-axe legs to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision where not required to comply with the widths in this Appendix or the Guidelines.
2. Dips must have no more than a 1 in 8 (12.5% - 7.1 degrees) entry and exit angle.
3. To have crossfalls between 3 per cent and 6 per cent.
4. For sealed roads only the maximum grade of no more than 1 in 5 (20 per cent) (11.3 degrees) for no more than 50 metres is permissible, except for short constrictions to 3.5 metres for no more than 30 metres in length where an obstruction cannot be reasonably avoided or removed.
5. As outlined in the Institute of Public Works Engineering Australasia (IPWEA) subdivision guidelines, Liveable Neighbourhoods, Austroads Standards Main Roads standard, supplement, policy or guideline and/or any applicable or relevant local government standard or policy.



Design requirement for a turnaround area

Appendix F:

Asset Protection Zone

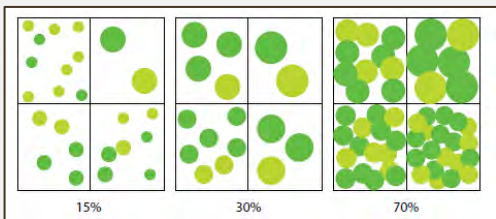
Technical Requirements

The following standards have been extracted from the Planning for Bushfire Guidelines (WAPC, 2024b).

Every habitable building is to be surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:

- a. Width: the APZ is measured from the development site, and of sufficient size to ensure the radiant heat impact of a bushfire does not exceed 29kW/m² (BAL-29) in all circumstances.
- b. Location: the APZ should be contained solely within the boundaries of the lot, except in instances where:
 - o the vegetation on the adjoining lot(s) is, and will continue to be, low threat as per Clause 2.2.3.2 of AS 3959 or the APZ technical requirements, or an alternative standard on a local planning scheme, on an ongoing basis in perpetuity; or
 - o the adjoining land is and will remain in perpetuity, non-vegetated.
- c. Management: the APZ is managed in accordance with the APZ technical requirements (below), or an alternative standard in a gazetted local planning scheme.

APZ Technical Requirements

Object	Requirement
Fences within the APZ	Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter less than 6 mm in thickness)	• Should be managed and removed on a regular basis to be maintained as a low threat vegetation. • Should be maintained at less than two tonnes per hectare (on average). • Mulches should be non-combustible such as stone, gravel, shells, rock or crushed mineral earth or wood mulch more than five millimetres in thickness.
Trees* (more than 6 m in height)	• Trunks at maturity should be a minimum distance of six metres from all elevations of the building. • Branches at maturity should not touch or overhang a building or powerline. • Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. • Canopy cover within the APZ should be less than 15 per cent of the total APZ area. • Tree canopies at maturity should be at least 5 m apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided the total canopy cover within the APZ does not exceed 15 per cent and is not connected to the tree canopy outside the APZ.  Tree canopy cover – ranging from 15 to 70 per cent at maturity

Object	Requirement
Shrub* and scrub* (0.5 m to 6 m in height). Shrub and scrub more than 6 m in height are to be treated as trees.	• Should not be located under trees or within three metres of buildings. • Should not be planted in clumps more than five square metres in area. • Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground cover* (less than 0.5 m in height. Ground cover more than 0.5 m in height is to be treated as shrub)	• Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above • Can be located within two metres of a structure but three metres from windows or doors if more than 100 mm in height.
Grass	• Grass should be maintained at a height of 100 mm or less, at all times • Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
Defendable space	Within three metres of each wall or supporting post of a habitable building; the area is kept free from vegetation but can include ground cover, grass and non-combustible mulches as prescribed above.
Liquid petroleum gas cylinders	• Should be located on the side of a building farthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. • The pressure relief valve should point away from the house. • No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.
* Plant flammability, landscaping design and maintenance should be considered - refer to explanatory notes in the Guidelines.	

ADDITIONAL NOTES

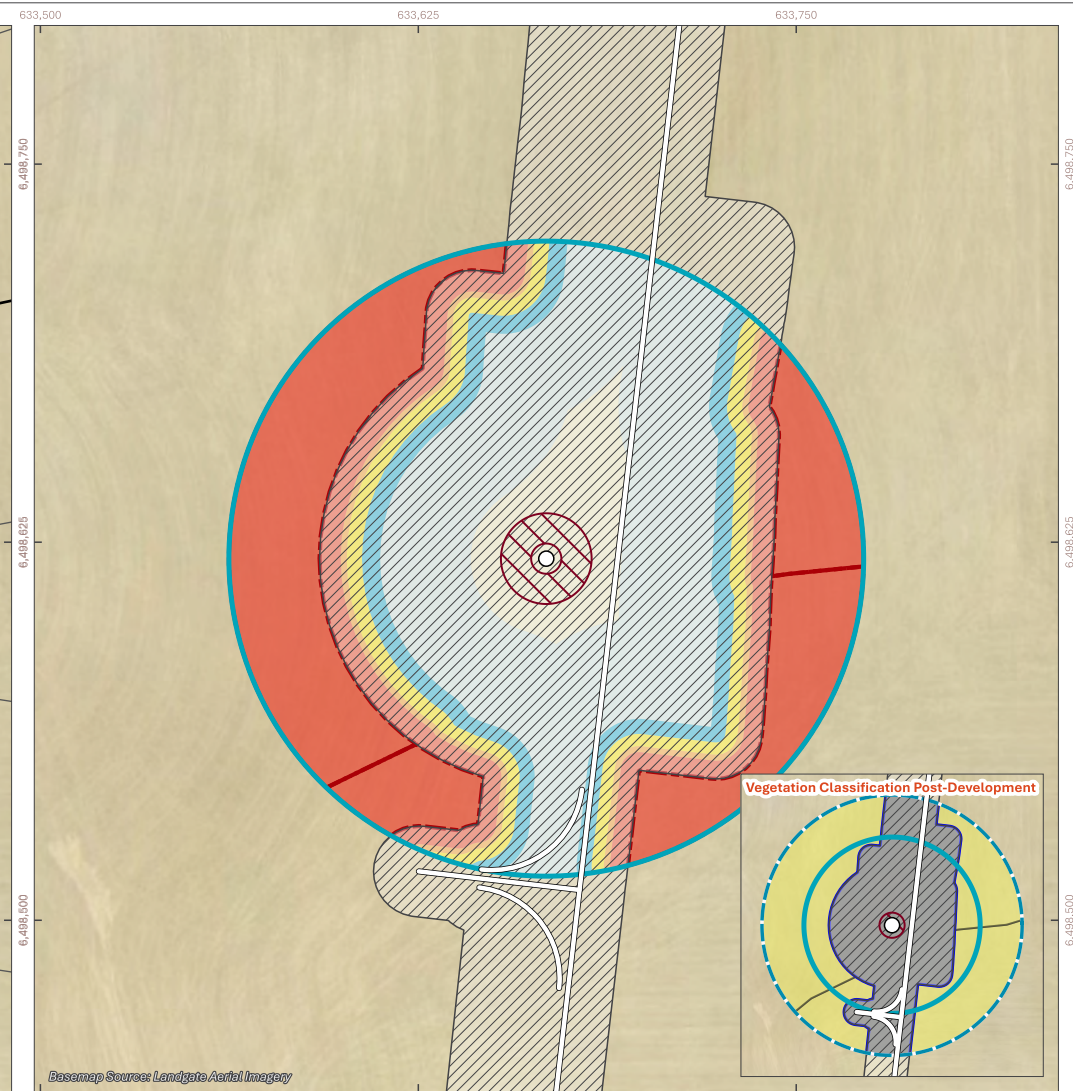
An Asset Protection Zone (APZ) is a low fuel area, maintained around a building to increase the likelihood a building will survive a bushfire, by reducing the potential for direct flame contact, radiant heat exposure and ember attack. The APZ allows emergency services access and provides an area for firefighters and homeowners to defend their property.

An APZ should be contained within the boundaries of the lot on which the building is situated, except in instances where it is demonstrated the vegetation on the adjoining land is, and will continue to be, low threat as per cl. 2.2.3.2 of AS 3959, or the vegetation on the adjoining lot is, and will remain in perpetuity, non-vegetated. However, it should be noted there is no requirement for a neighbouring landowner or land manager (public or private) to be party to a legal agreement to undertake ongoing management of vegetation as low threat, in perpetuity.

Appendix G:

Wind Turbine Generators

BAL Assessments



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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: PROJECT NUMBER:
1:2,500 A25.368

DRAWN BY / REVIEWED BY:
SM / DW 17/8/2026

Figure 11: Bushfire Assessment - T01

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW

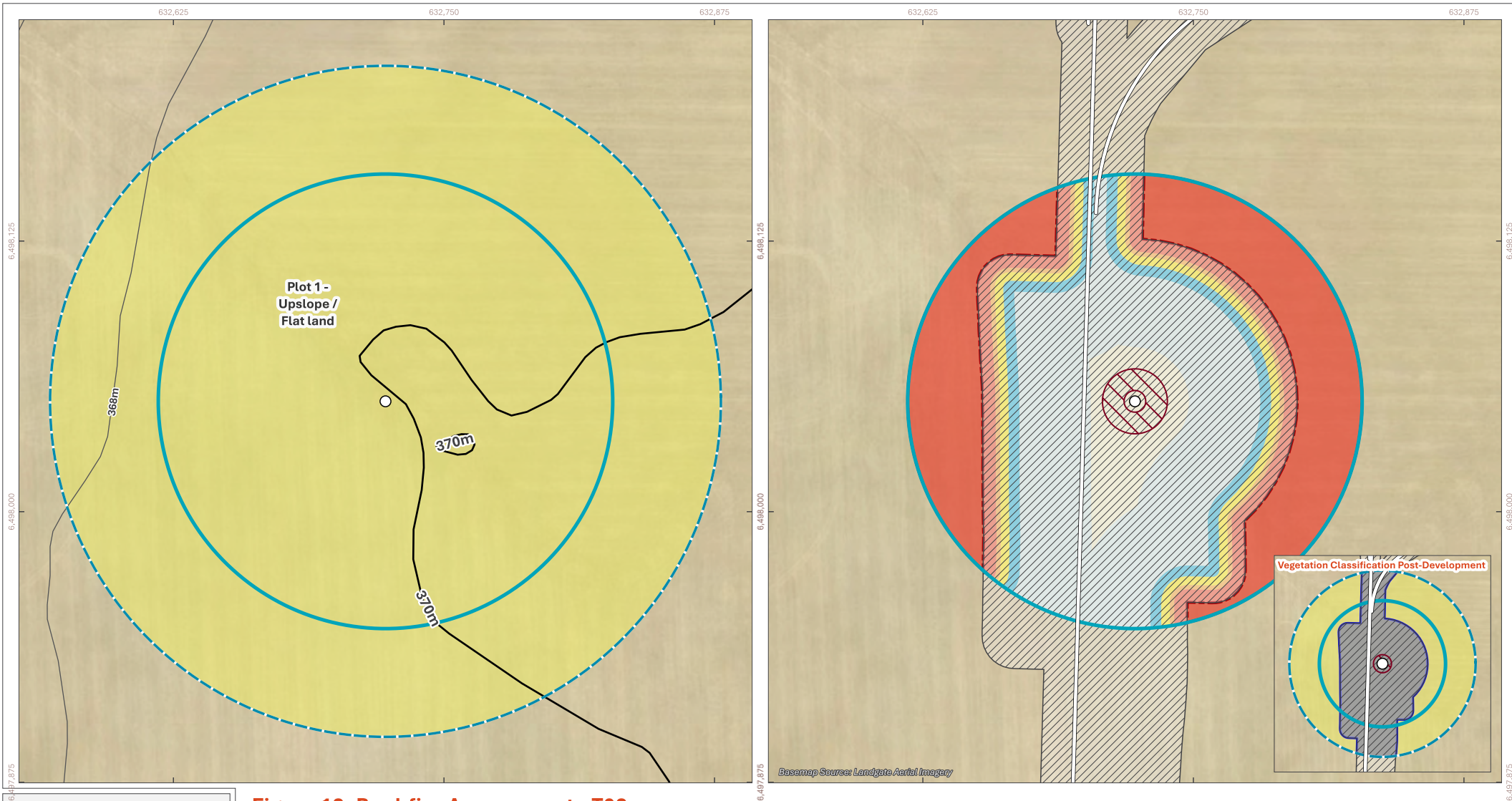


Figure 12: Bushfire Assessment - T02

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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: PROJECT NUMBER:
1:2,500 A25.368

DRAWN BY / REVIEWED BY:
SM / DW 17/8/2026

N

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▧ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW

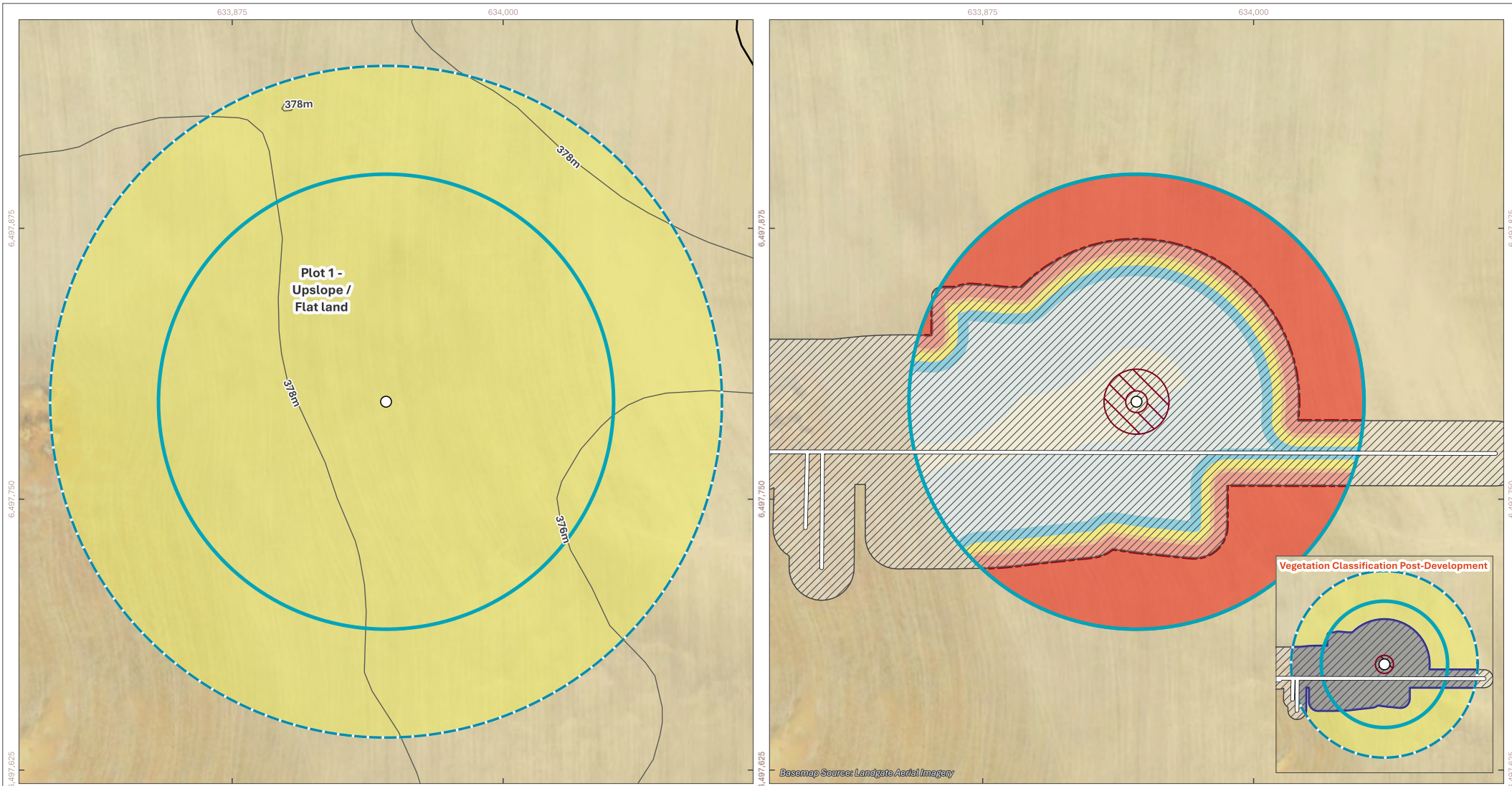


Figure 13: Bushfire Assessment - T03

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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: PROJECT NUMBER:
1:2,500 A25.368

DRAWN BY / REVIEWED BY:
SM / DW 17/8/2026

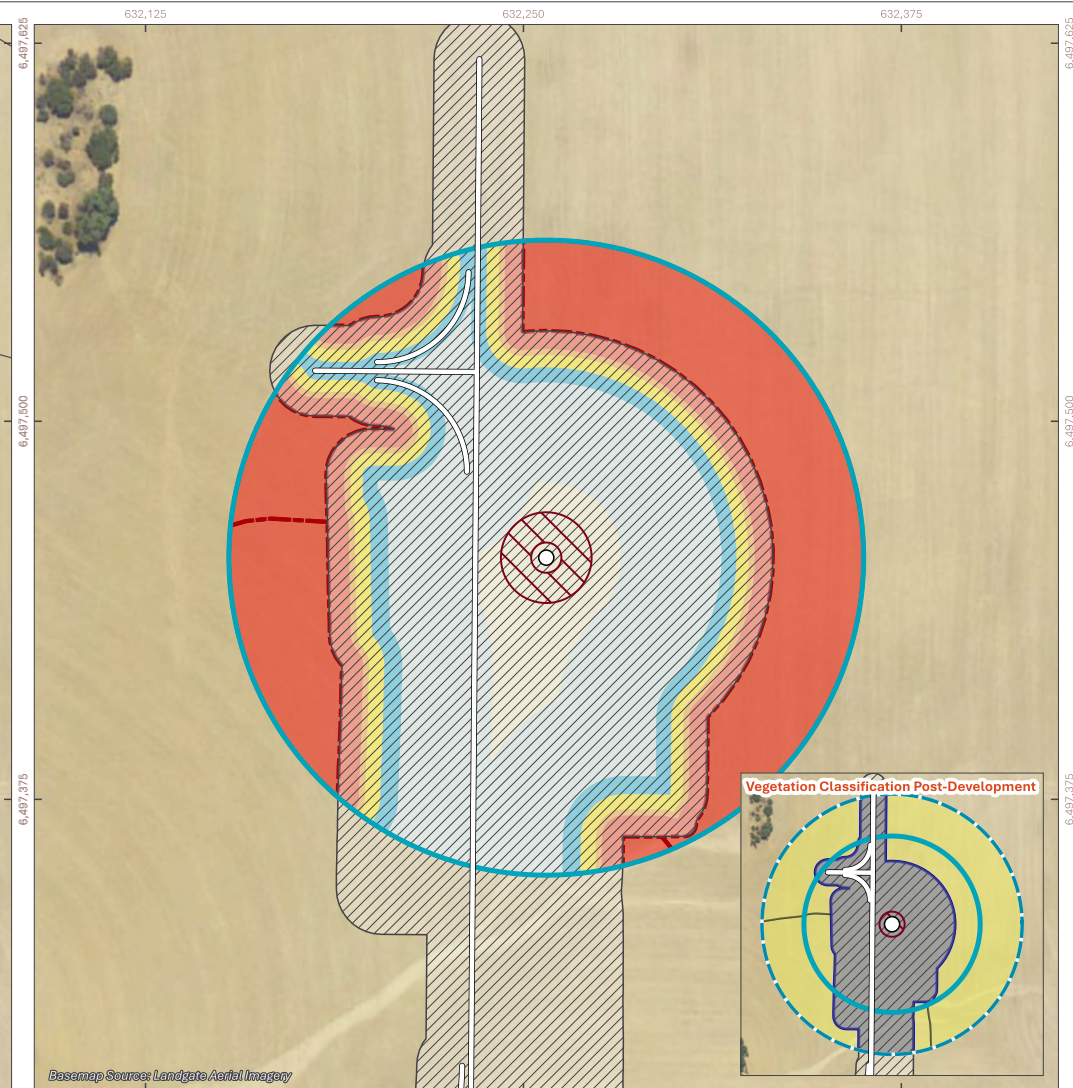


- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: PROJECT NUMBER:
1:2,500 A25.368

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Figure 14: Bushfire Assessment - T04

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



Figure 16: Bushfire Assessment - T06

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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: 1:2,500 PROJECT NUMBER: A25.368

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- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW

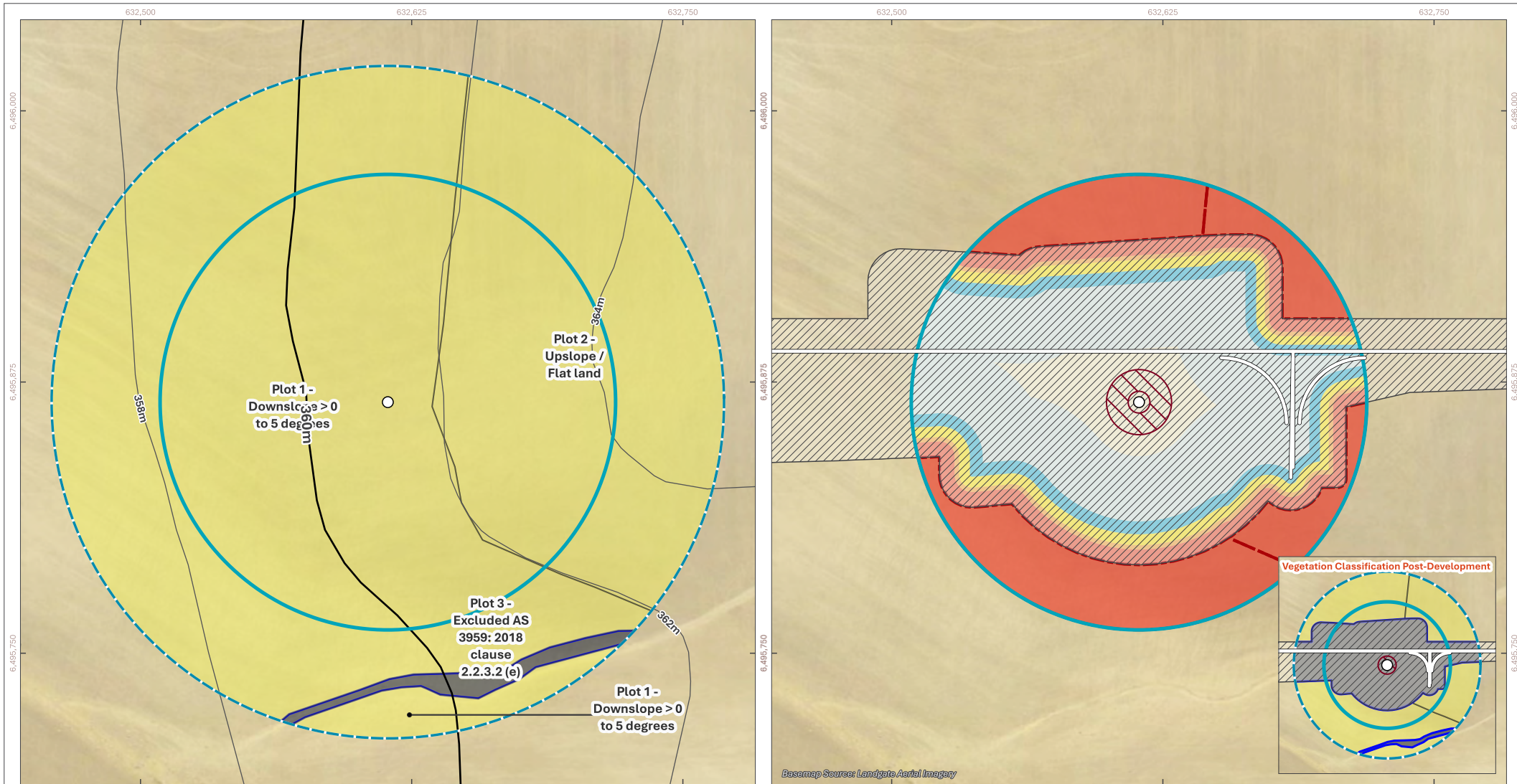
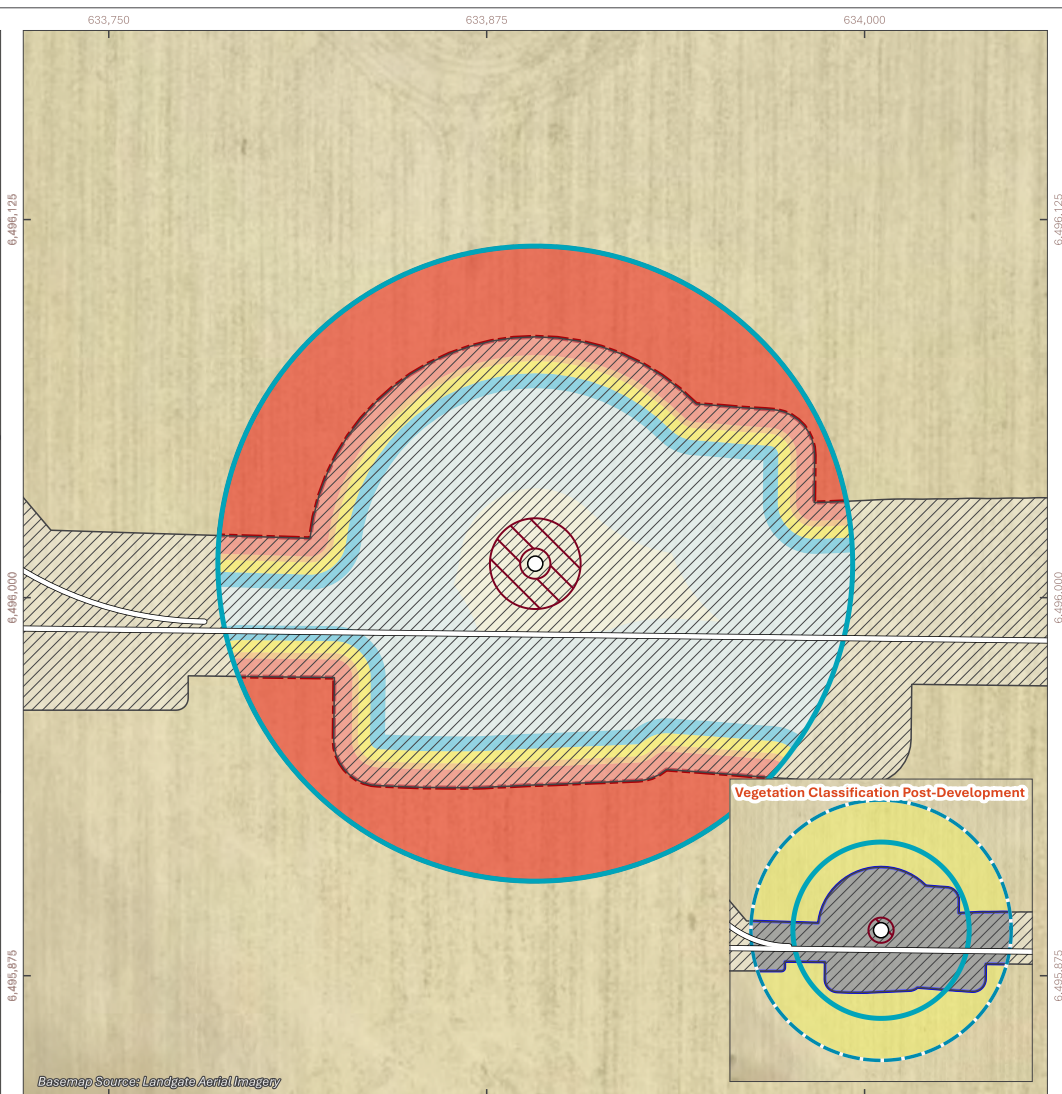
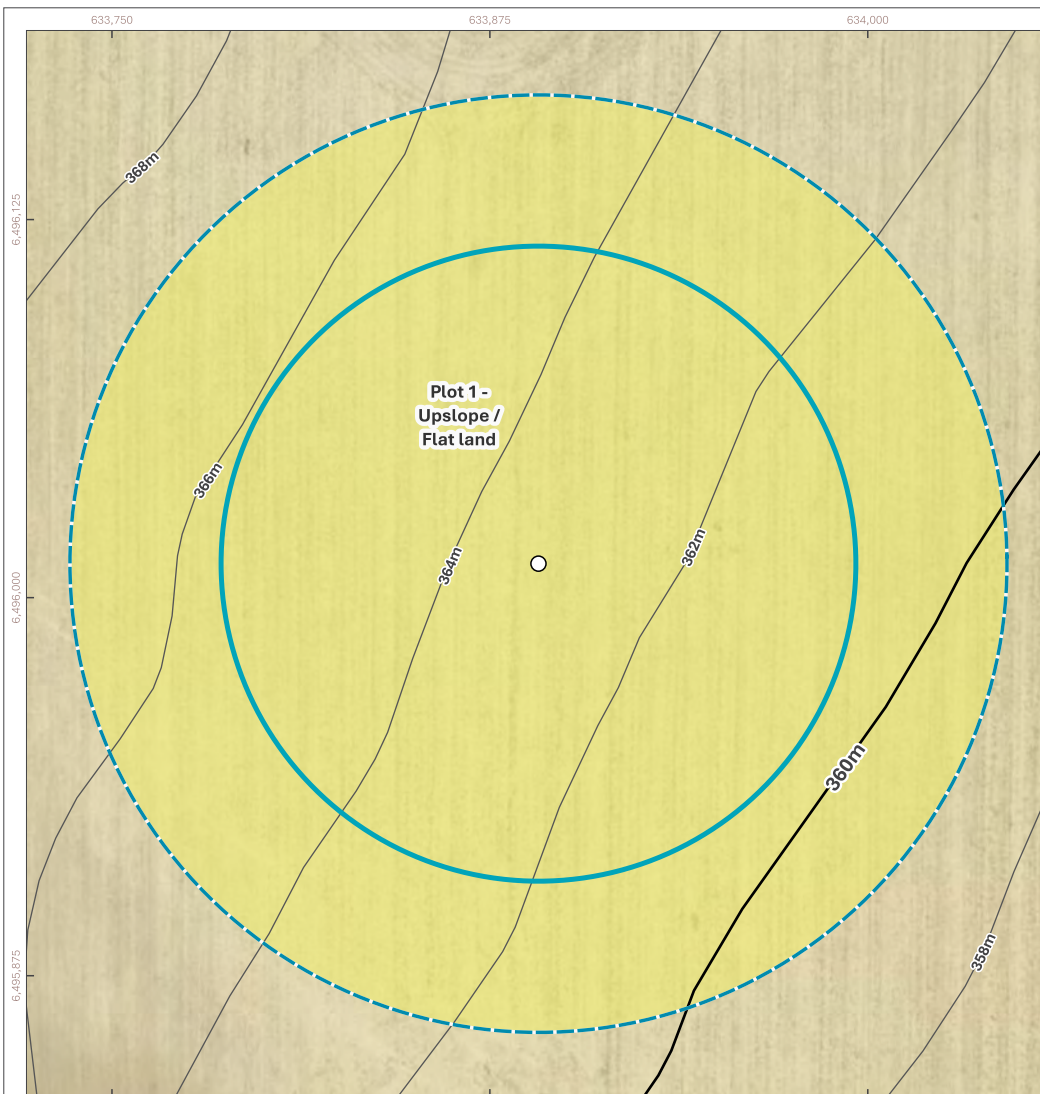


Figure 17: Bushfire Assessment - T07



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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: 1:2,500 PROJECT NUMBER: A25.368

DRAWN BY / REVIEWED BY:
SM / DW 17/8/2026

Figure 18: Bushfire Assessment - T08

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW

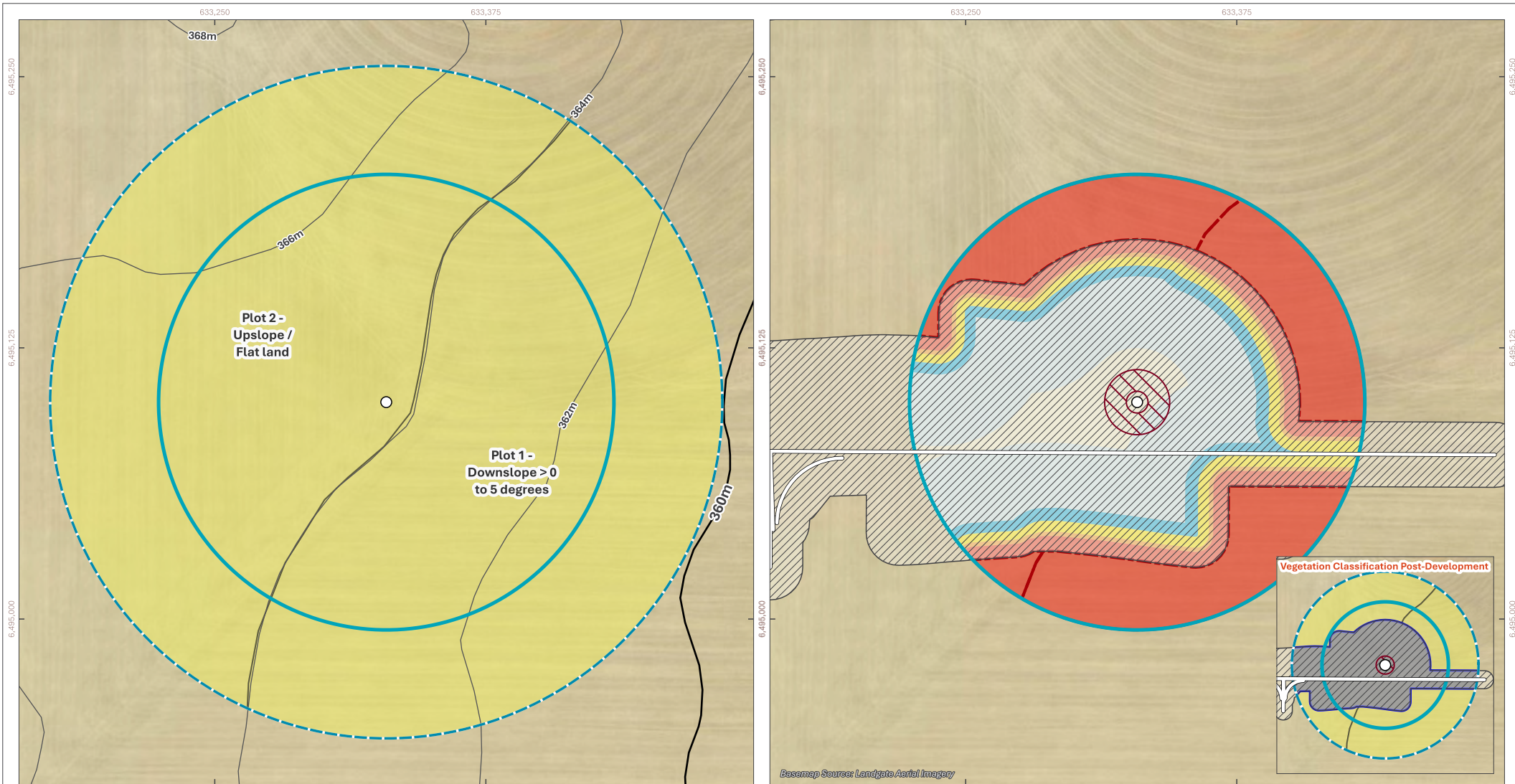


Figure 19: Bushfire Assessment - T09

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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: 1:2,500 PROJECT NUMBER: A25.368

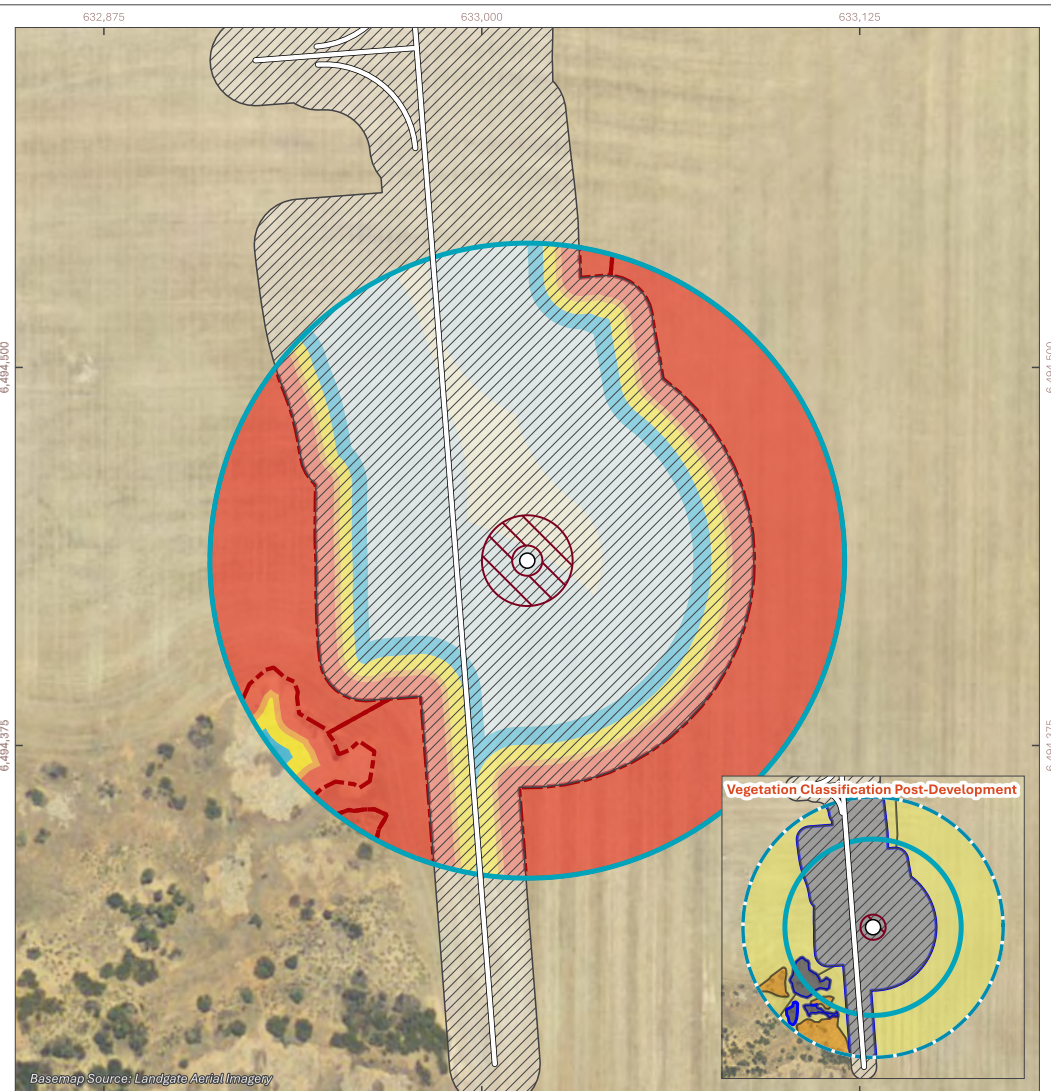
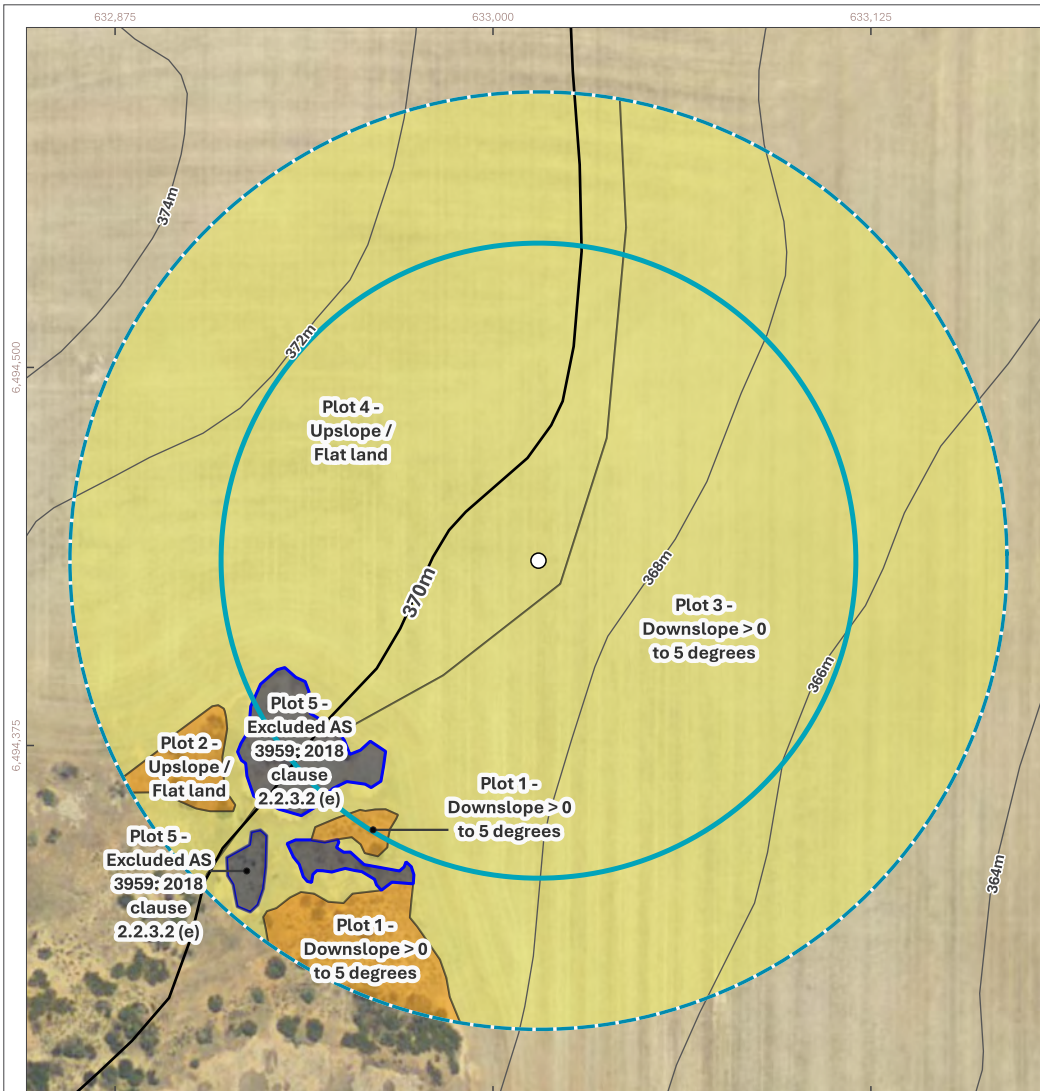
DRAWN BY / REVIEWED BY: SM / DW 17/8/2026

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: 1:2,500 PROJECT NUMBER: A25.368

DRAWN BY / REVIEWED BY:
SM / DW 17/8/2026

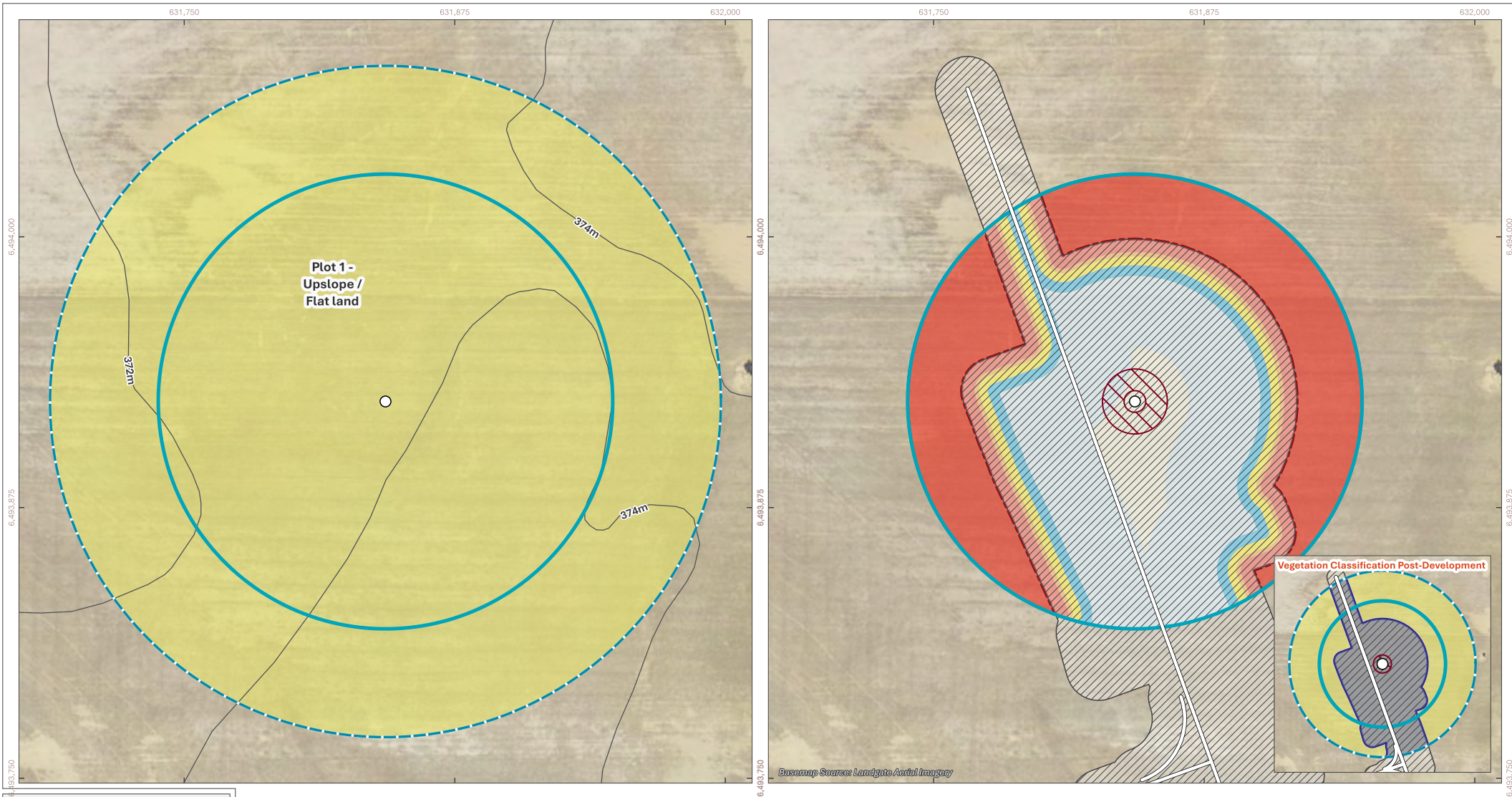
Figure 20: Bushfire Assessment - T10

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class D - Scrub
 - ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW



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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: PROJECT NUMBER:
1:2,500 A25.368

DRAWN BY / REVIEWED BY:
SM / DW 17/8/2026

N

Figure 21: Bushfire Assessment - T11

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW

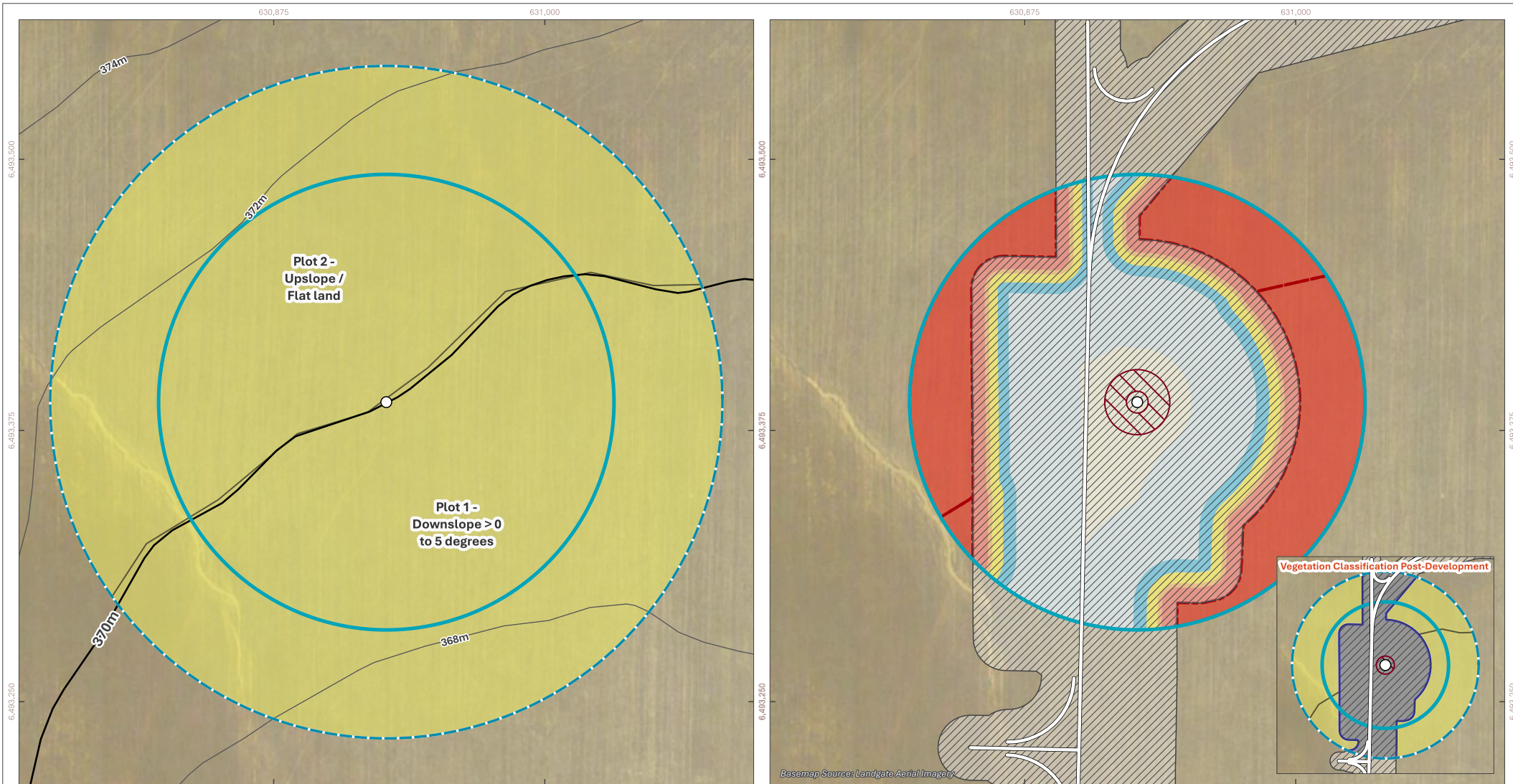


Figure 22: Bushfire Assessment - T12

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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
GDA2020 / MGA Zone 50

SCALE: PROJECT NUMBER:
1:2,500 A25.368

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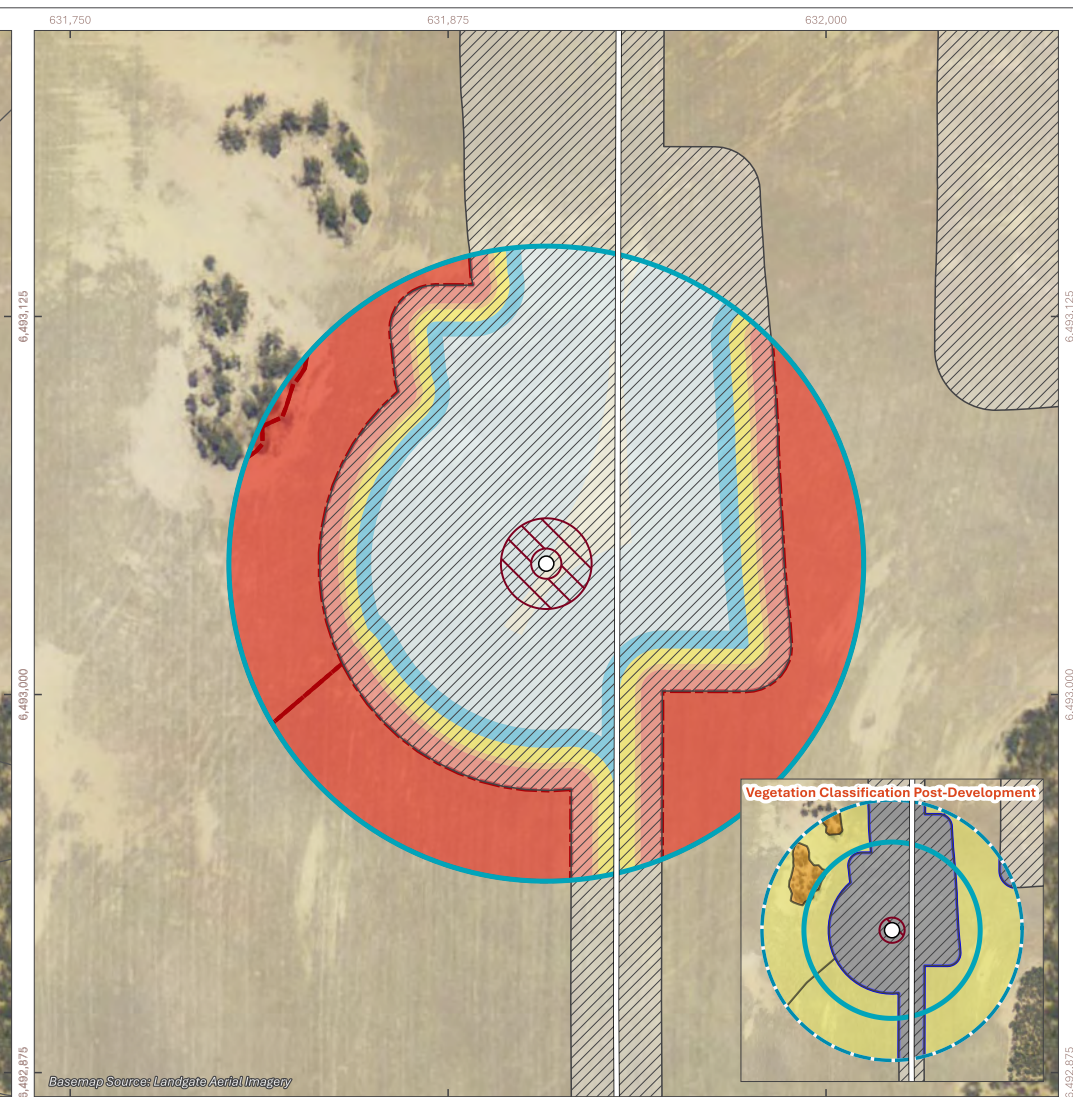


- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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0 20 40 60 80 m

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Figure 23: Bushfire Assessment - T13

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▧ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class D - Scrub
 - ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW



Figure 24: Bushfire Assessment - T14

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0 20 40 60 80 m

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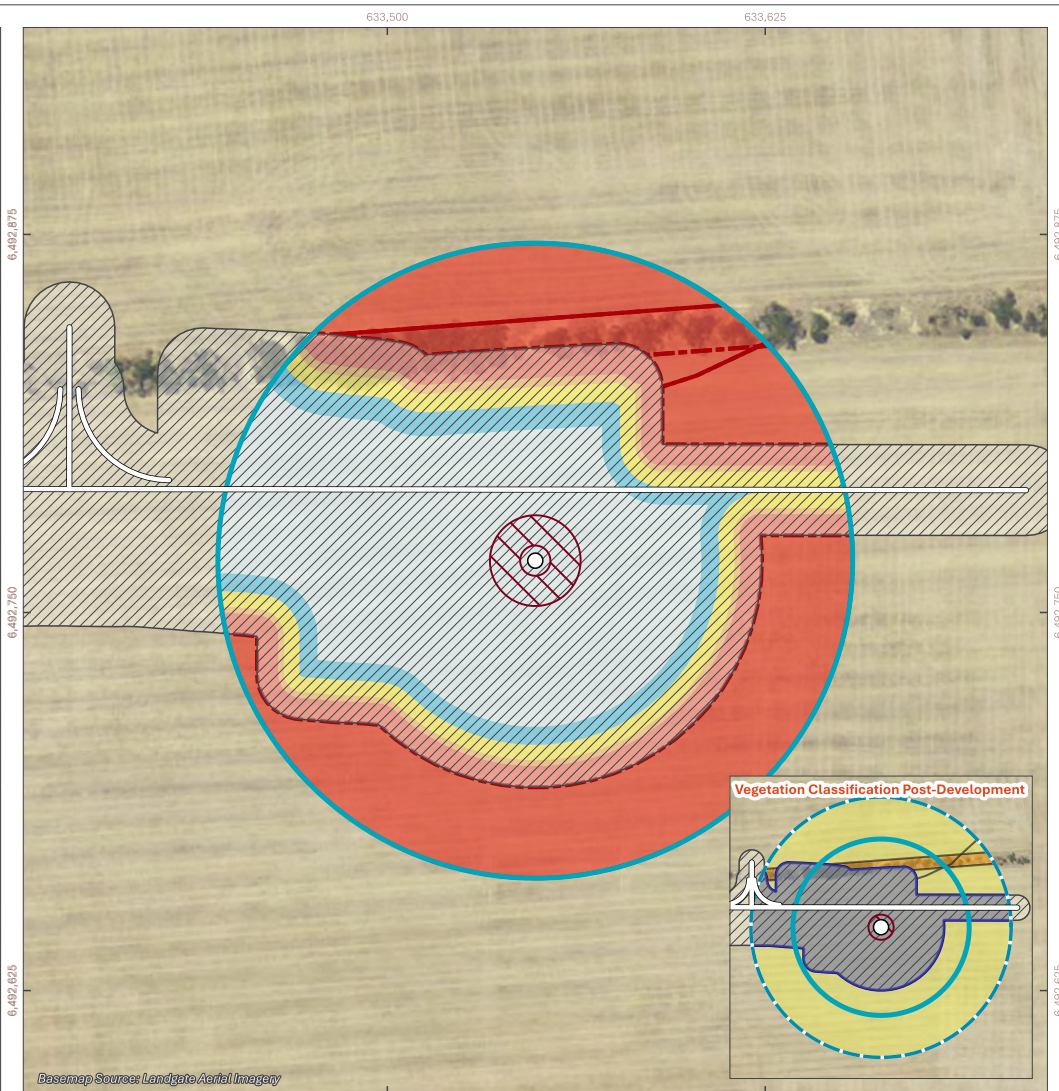
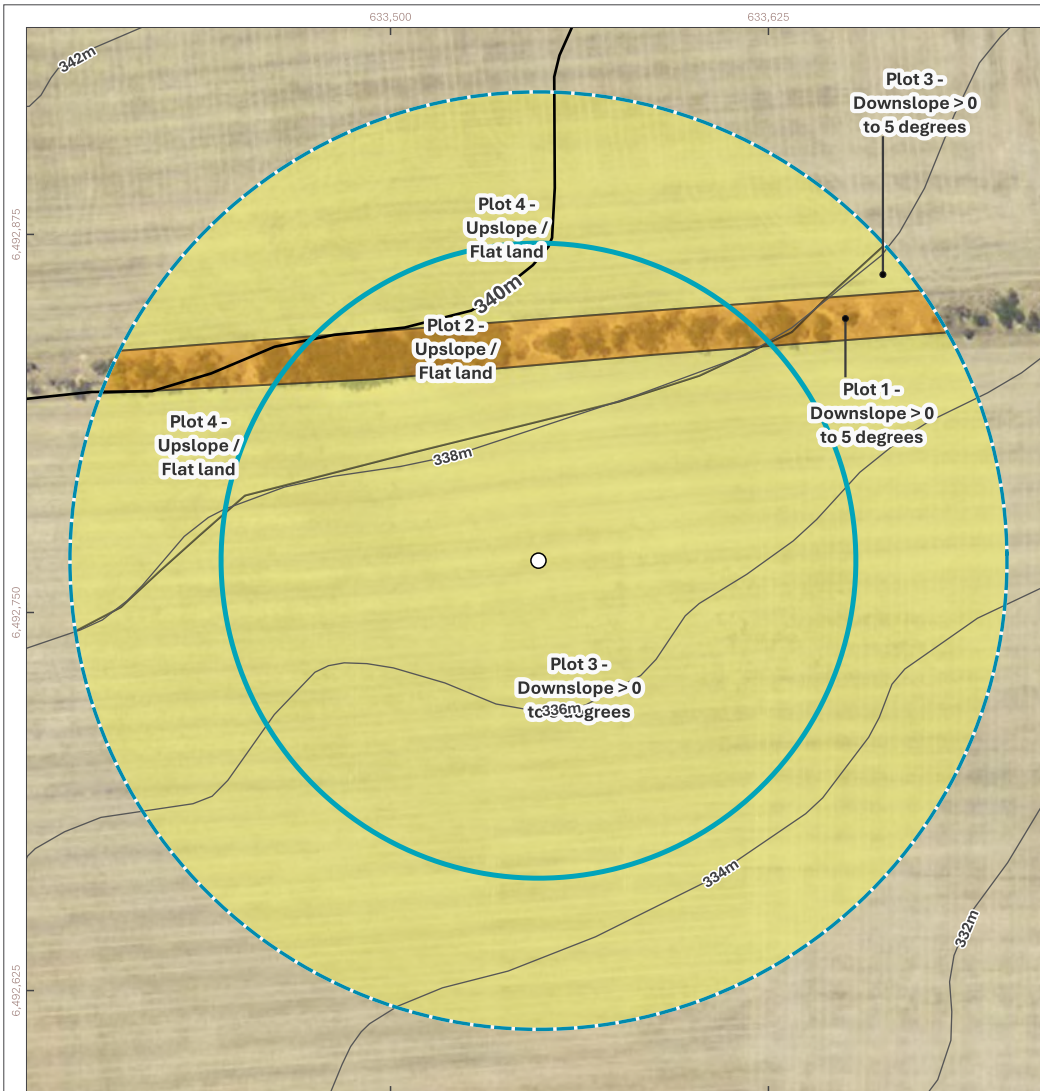
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- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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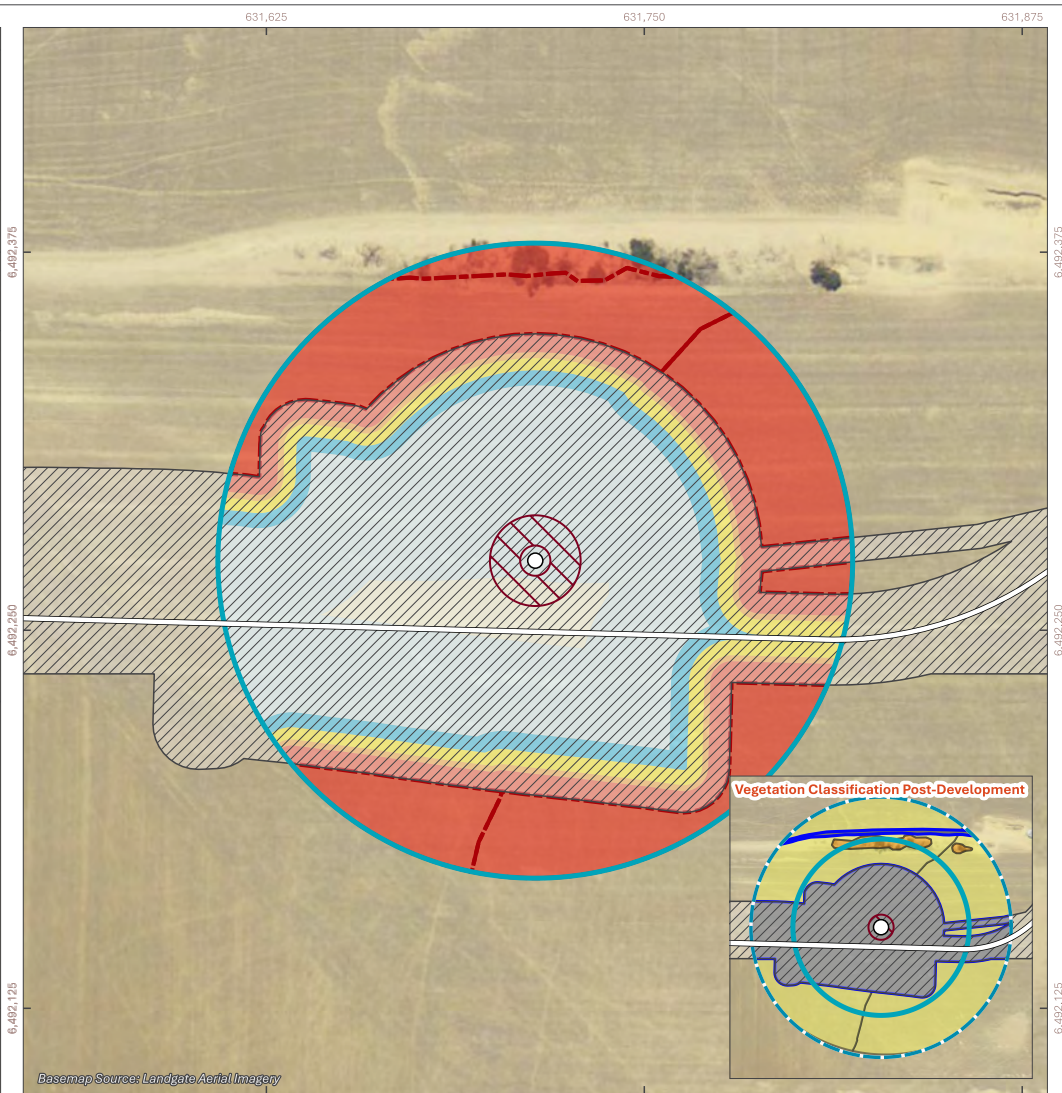
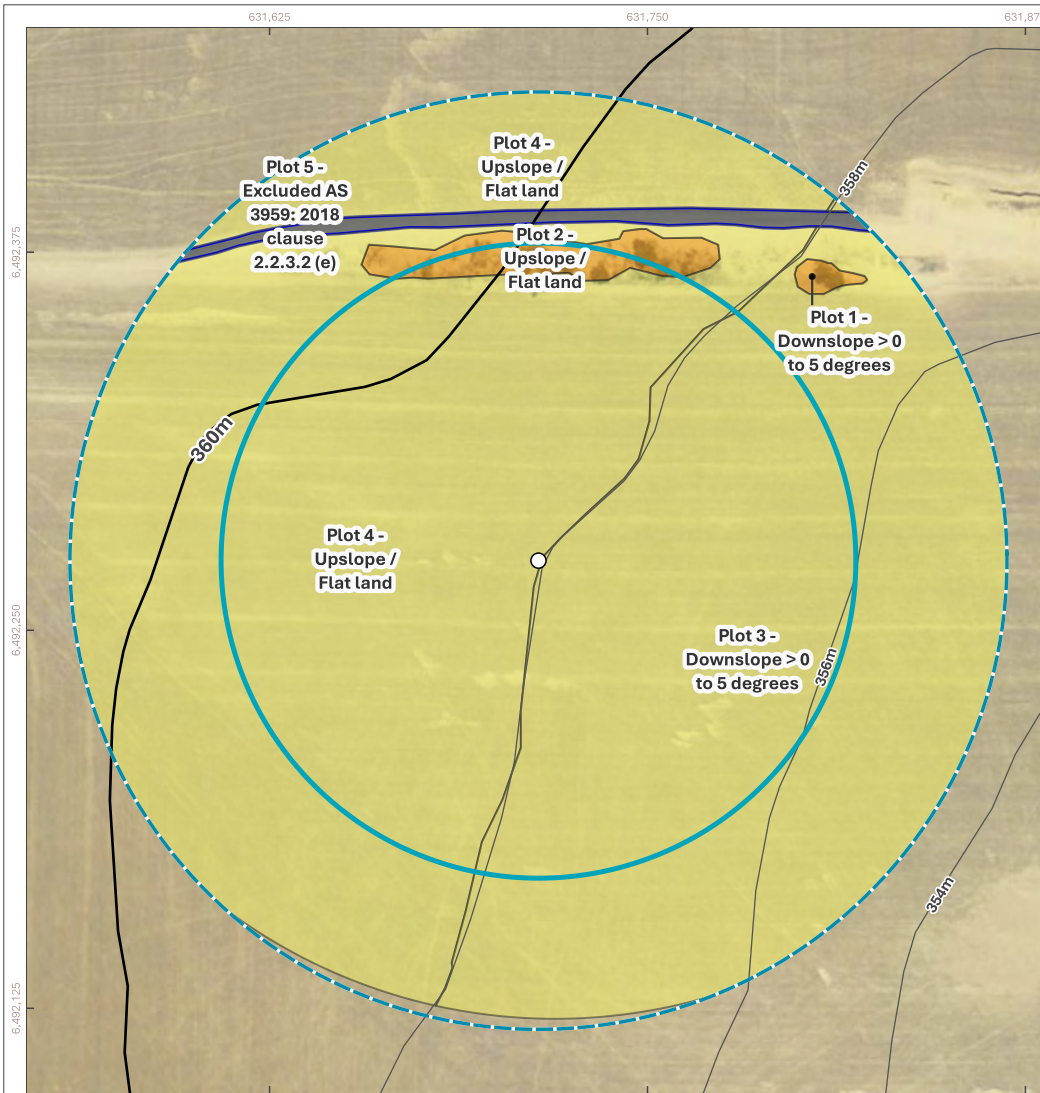
Figure 25: Bushfire Assessment - T15

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class D - Scrub
 - ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW



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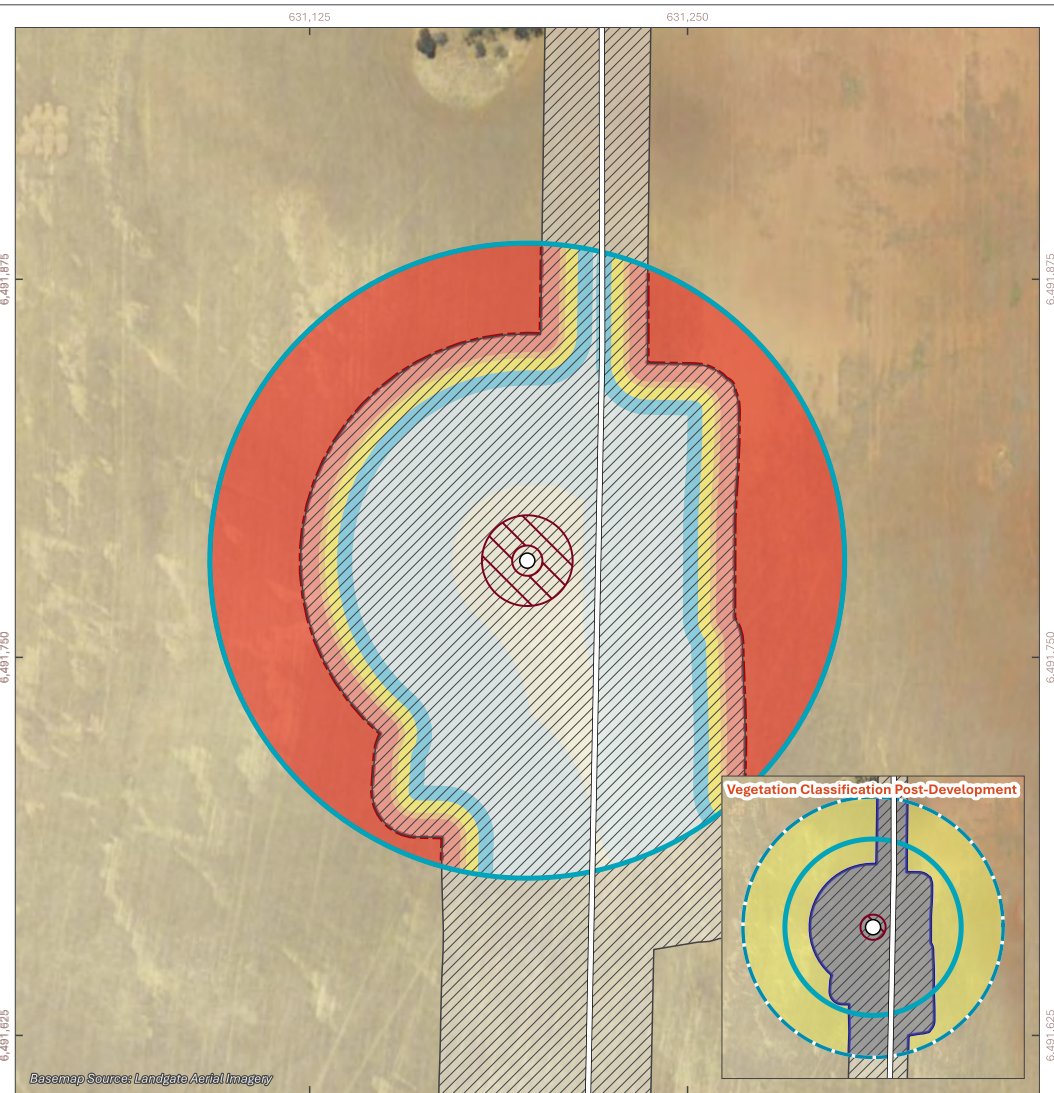
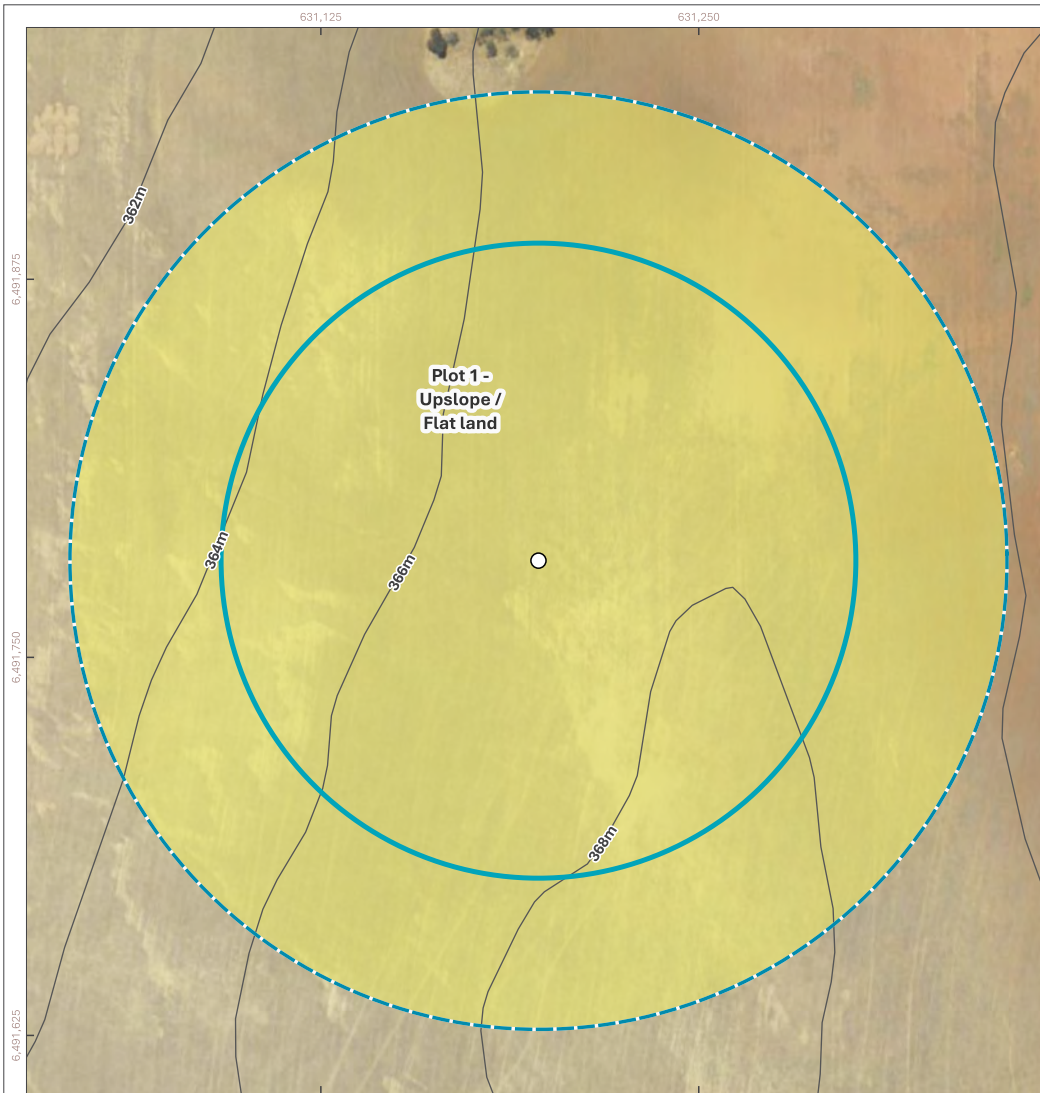
Figure 26: Bushfire Assessment - T16

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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Figure 27: Bushfire Assessment - T17

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



Figure 28: Bushfire Assessment - T18

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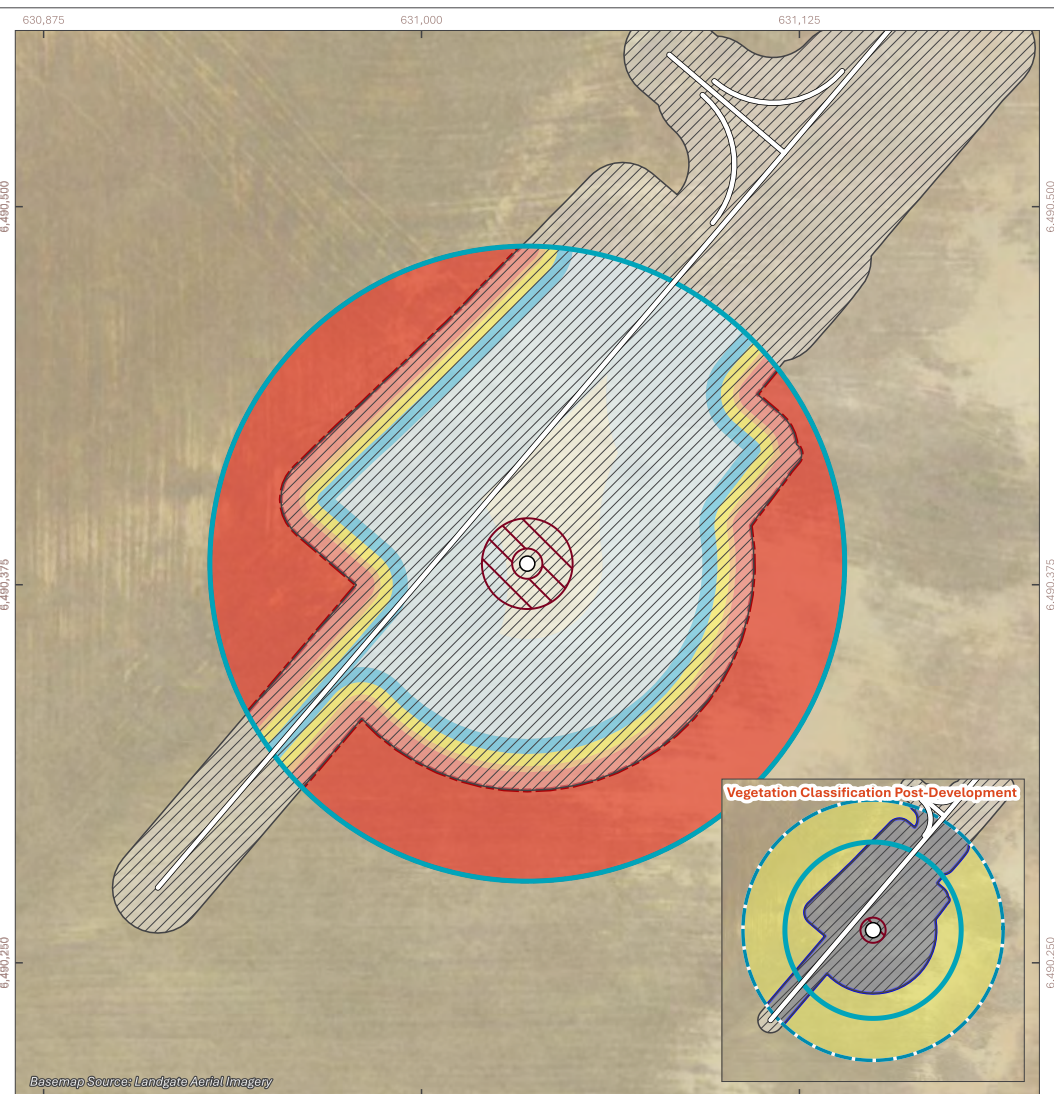
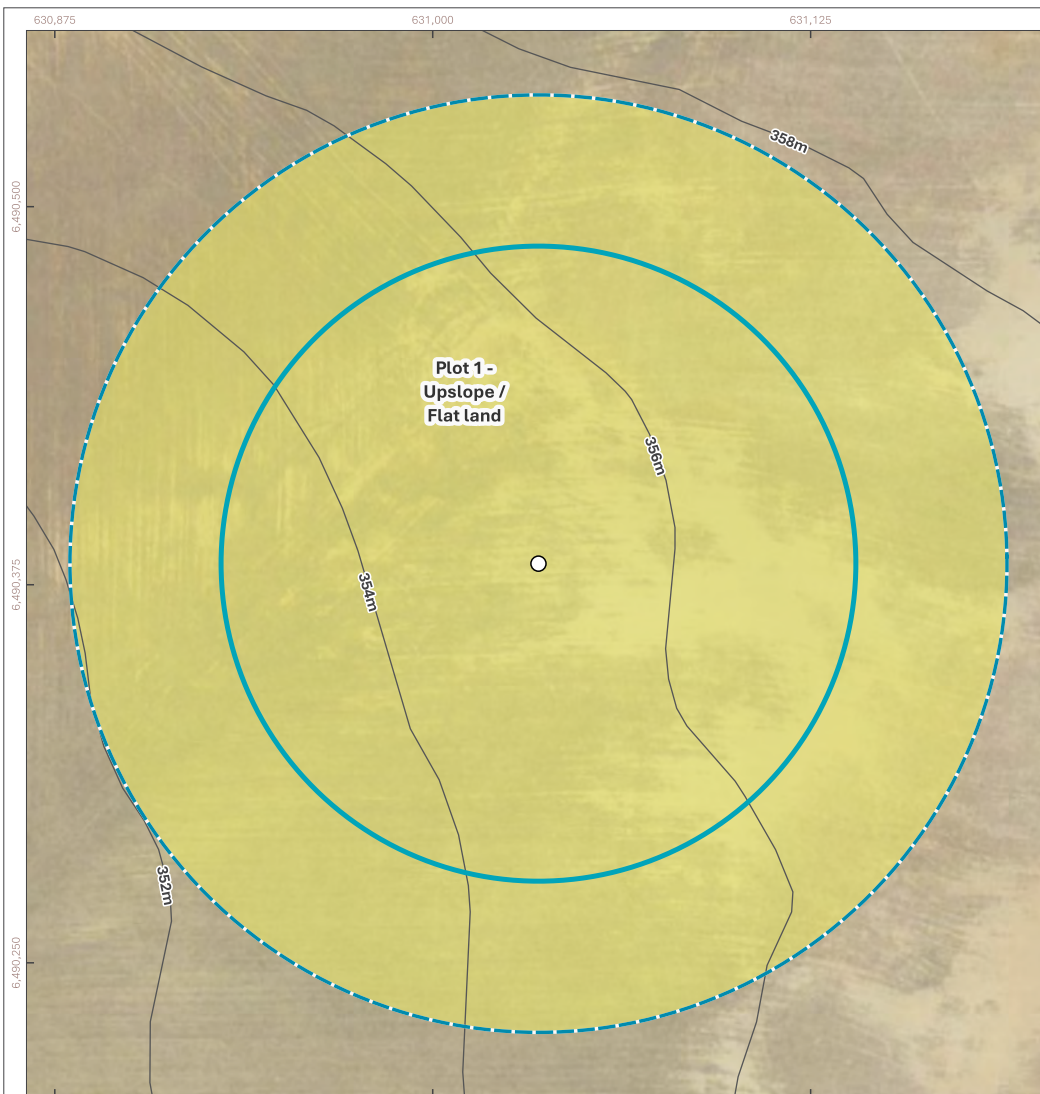


- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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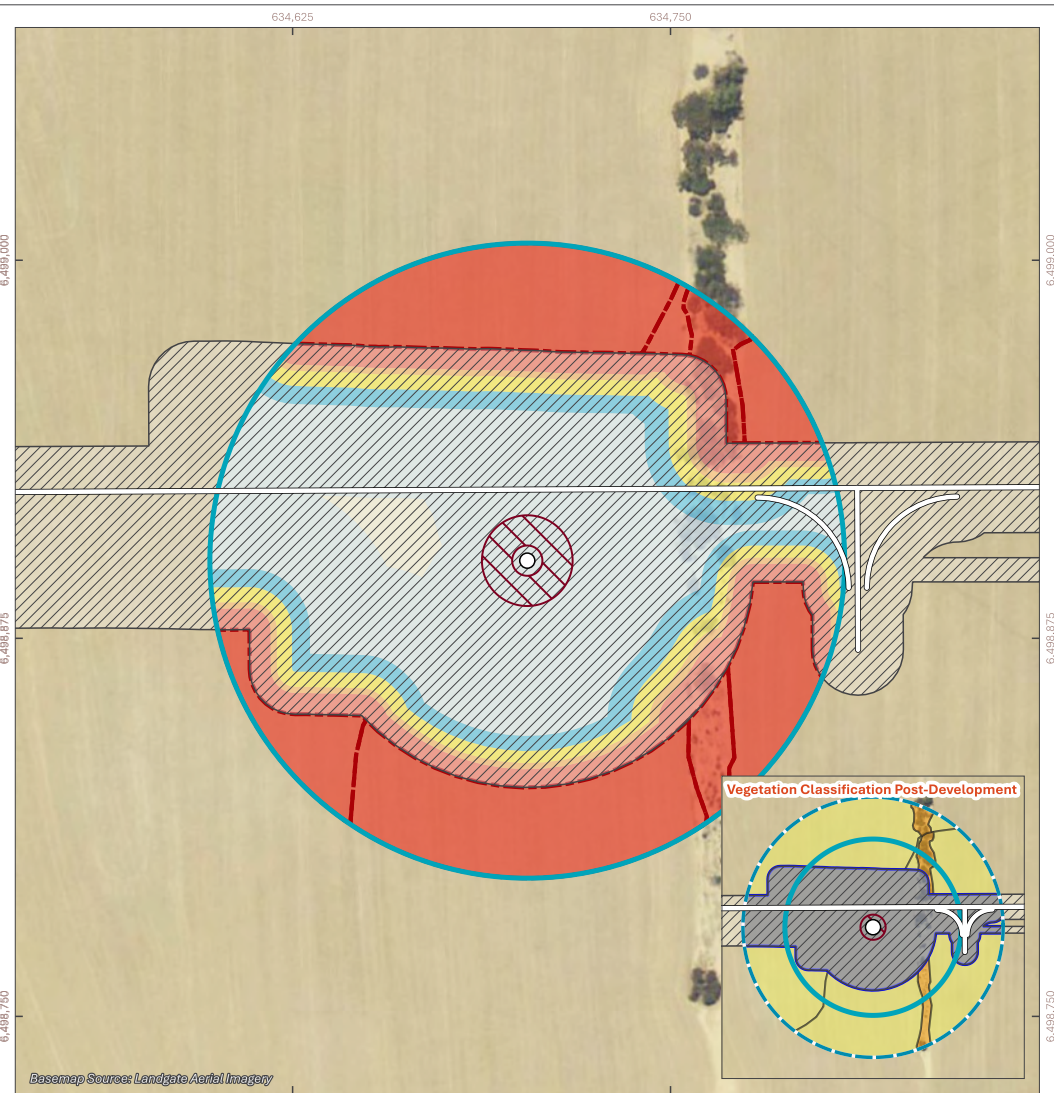
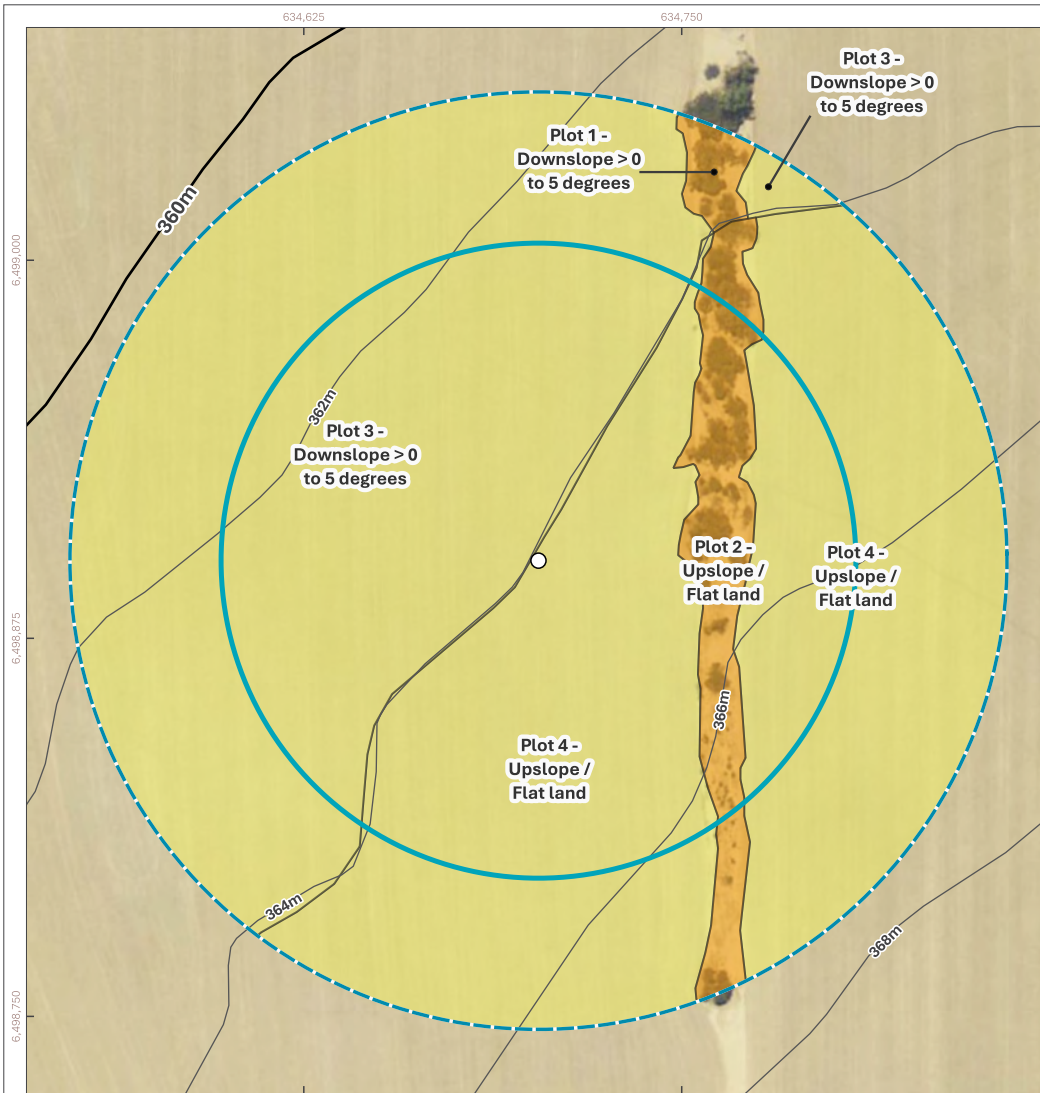
Figure 29: Bushfire Assessment - T19

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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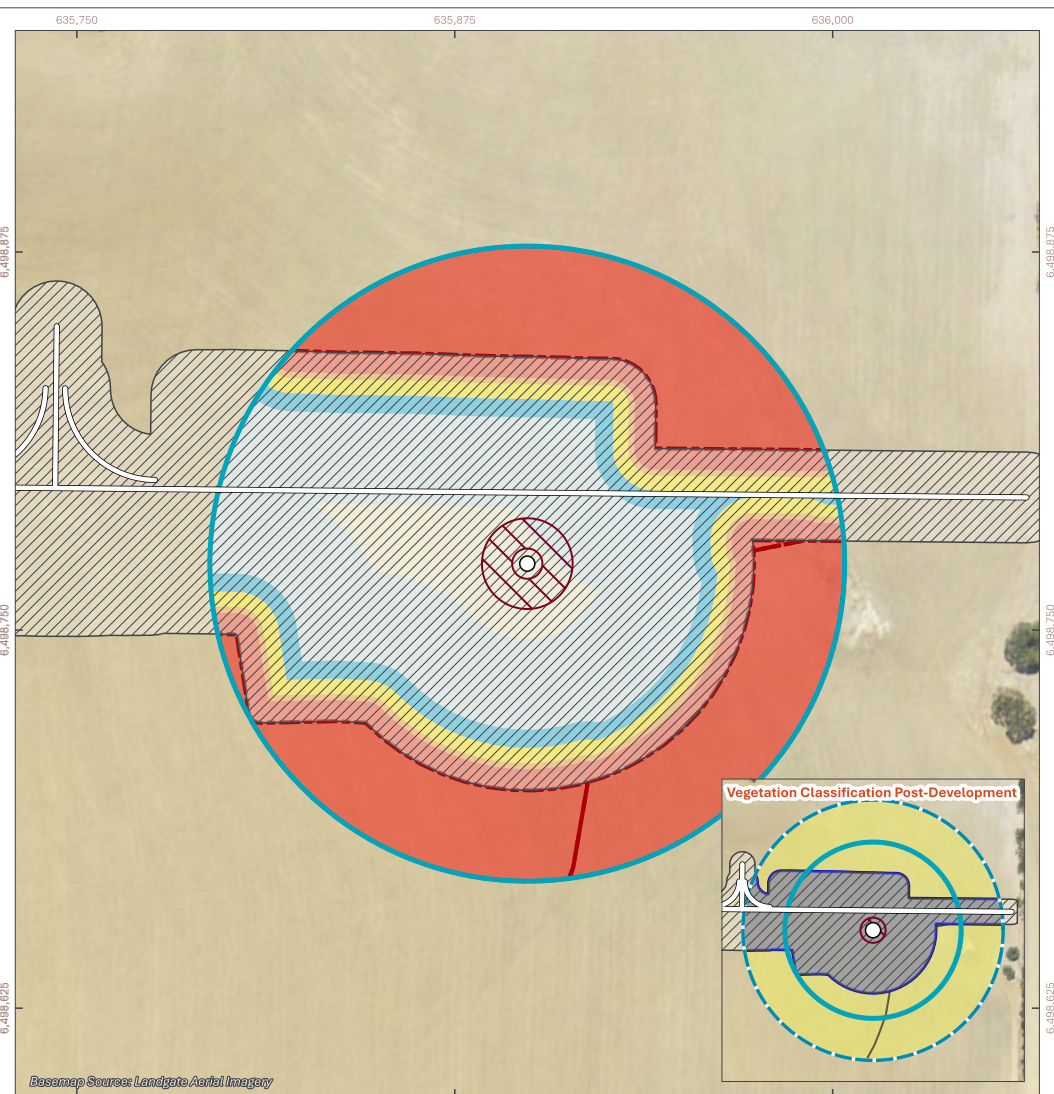
Figure 30: Bushfire Assessment - T20

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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Figure 31: Bushfire Assessment - T21

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW

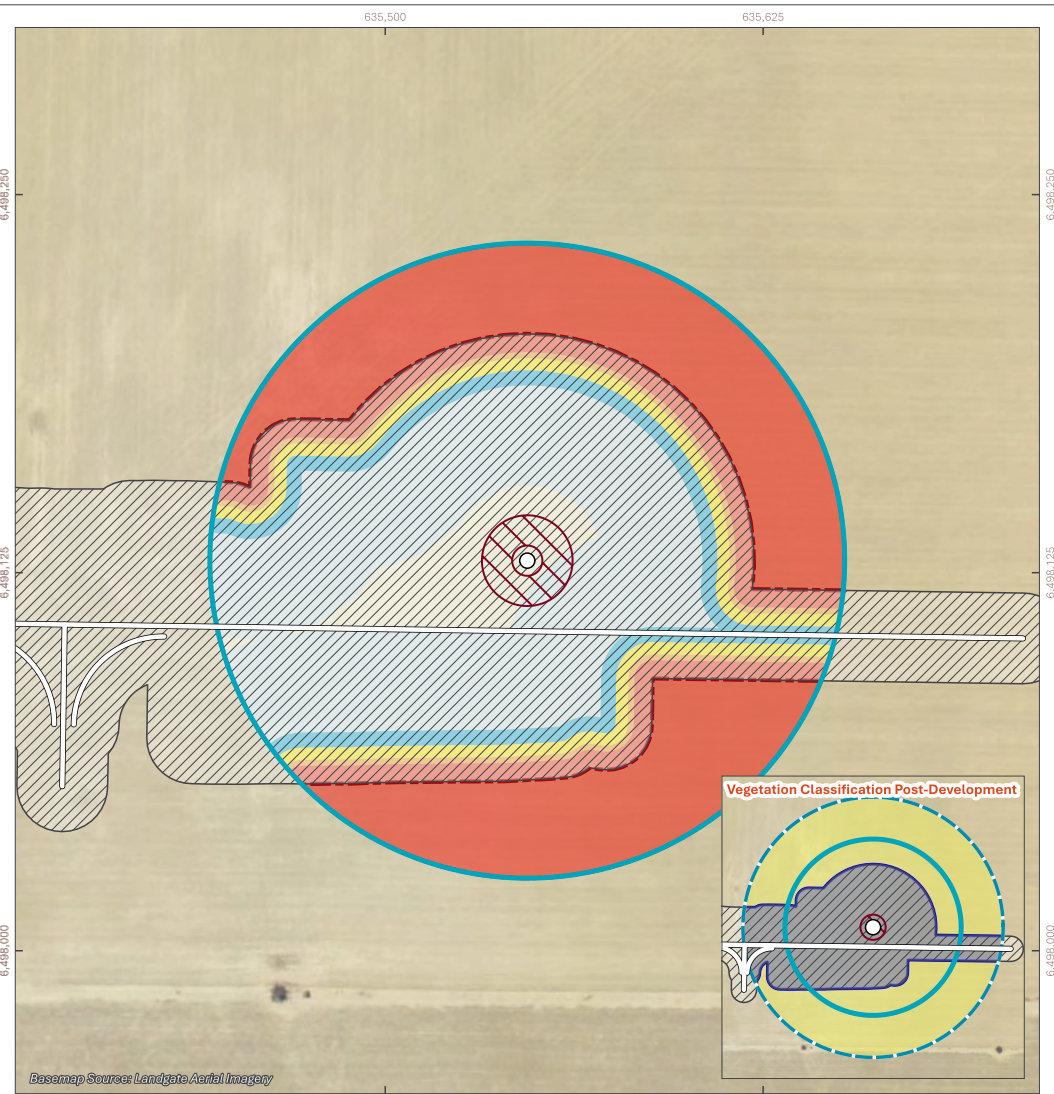
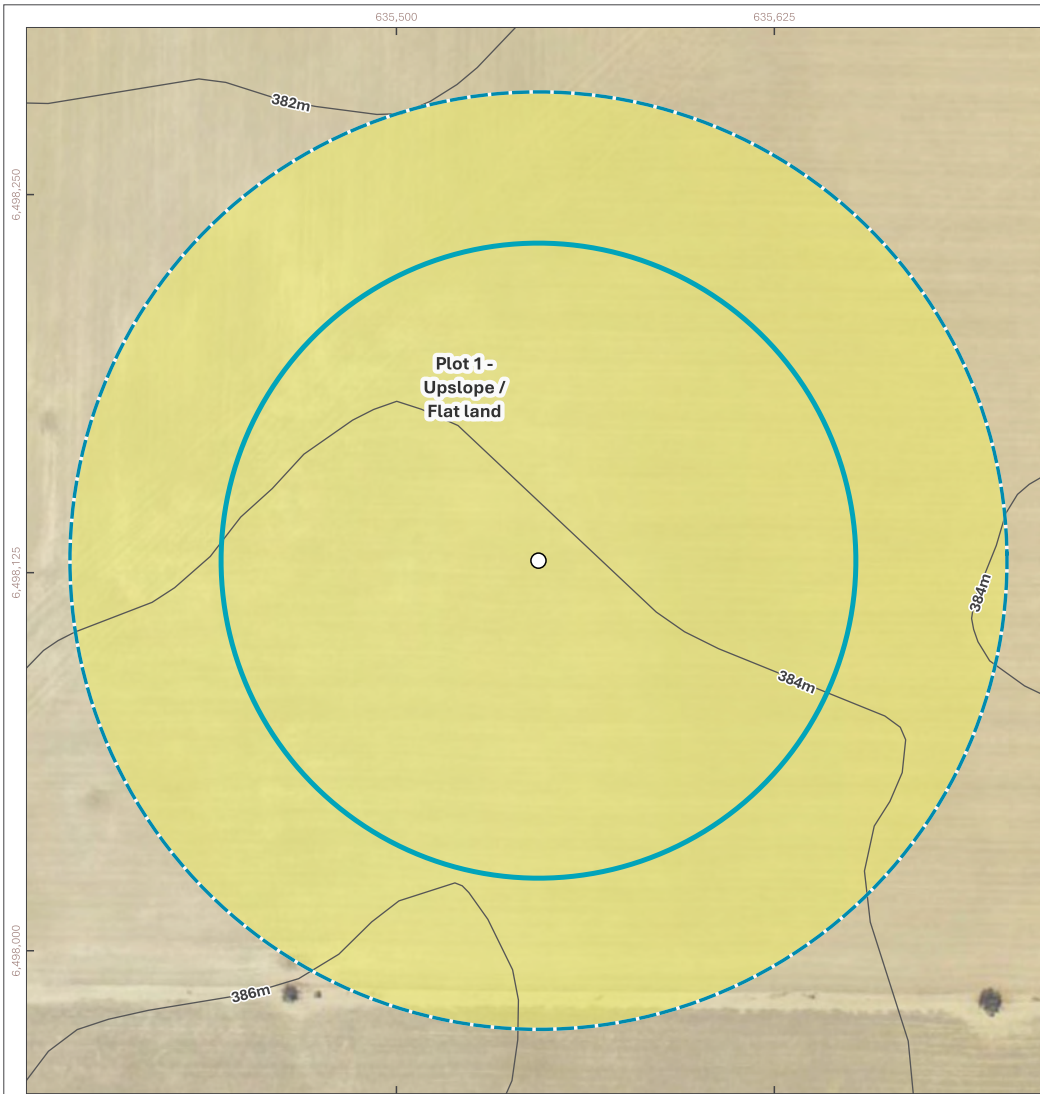


Figure 32: Bushfire Assessment - T22

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- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - Access Road
 - Indicative Footprint
 - Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



Figure 33: Bushfire Assessment - T23

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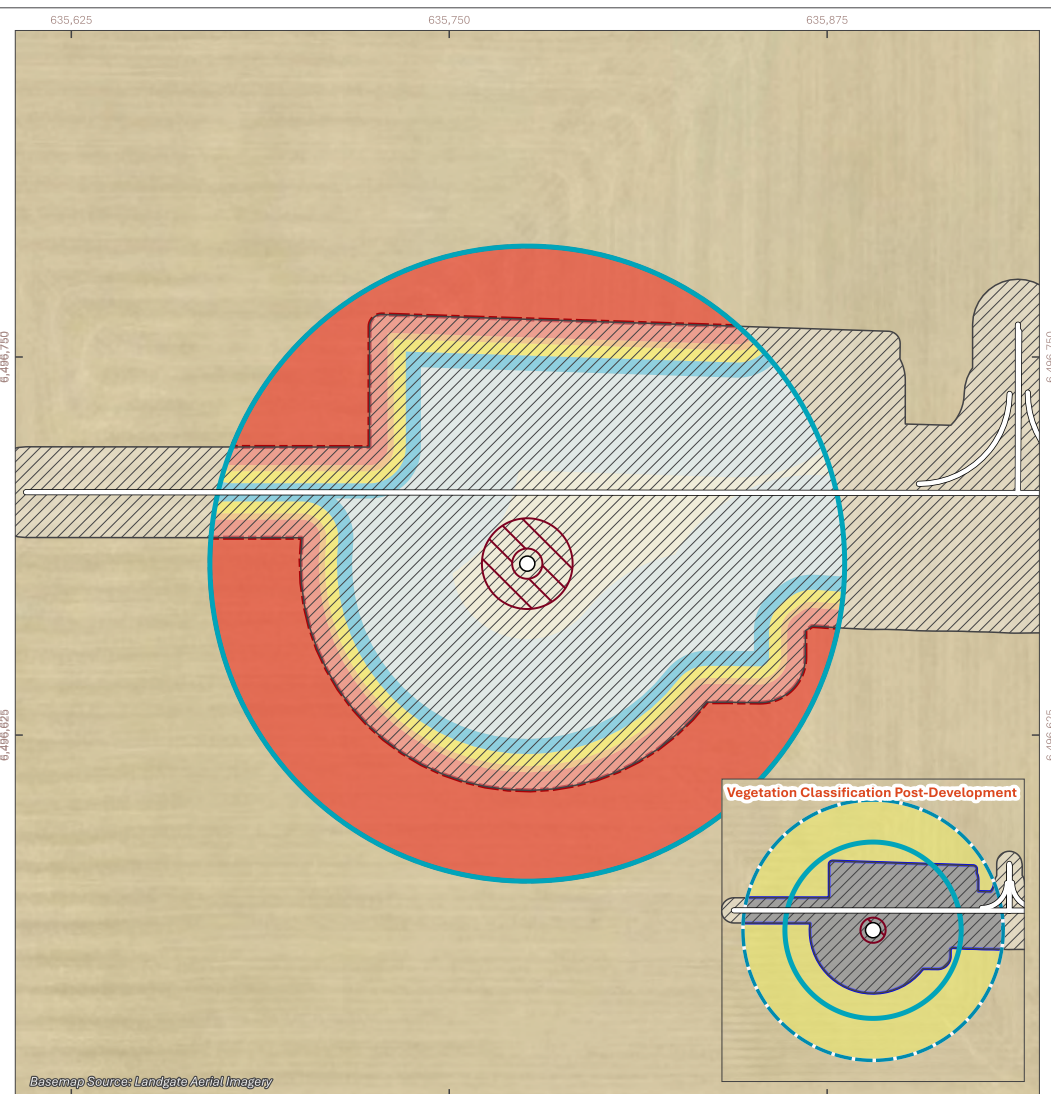


- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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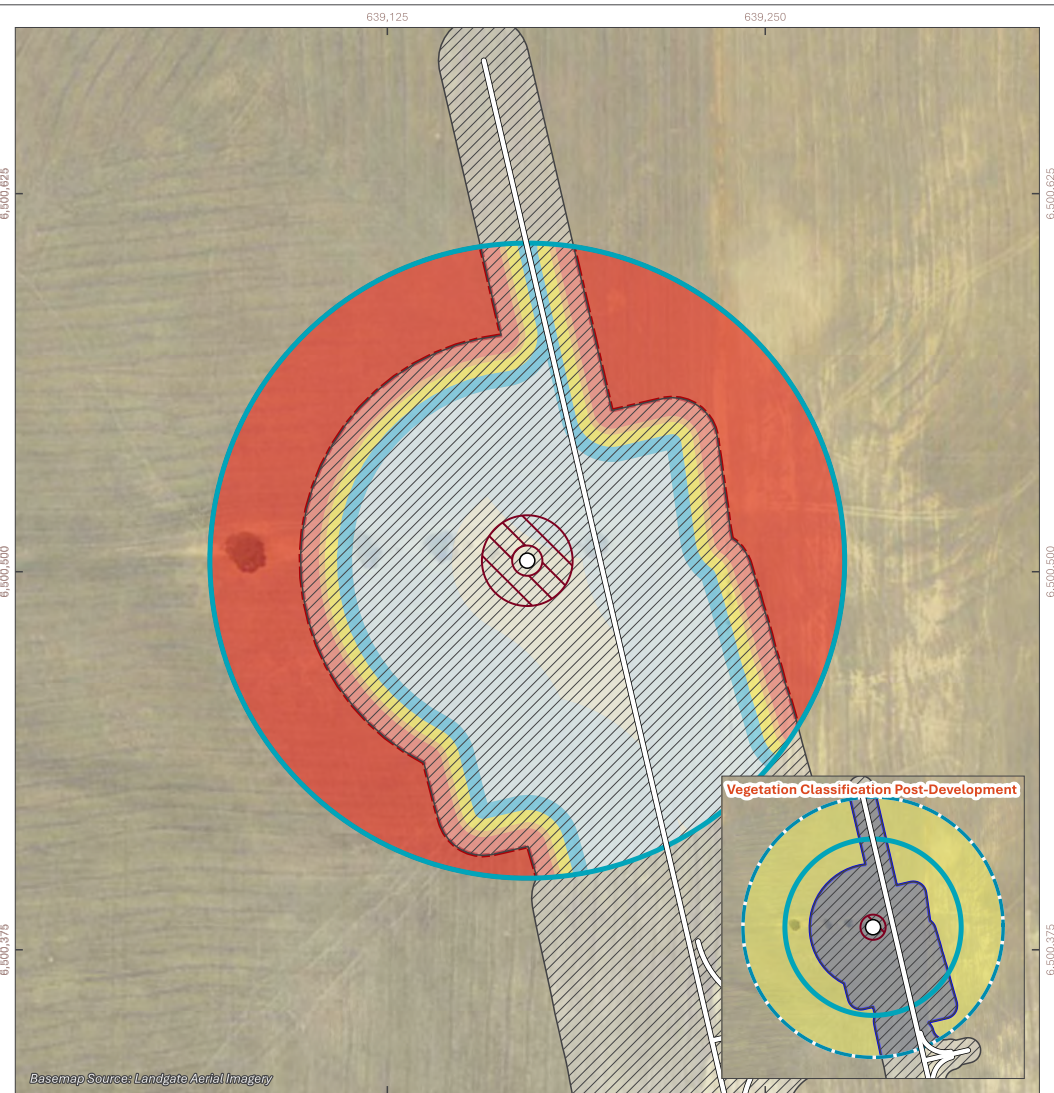
Figure 34: Bushfire Assessment - T24

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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Figure 35: Bushfire Assessment - T25

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW

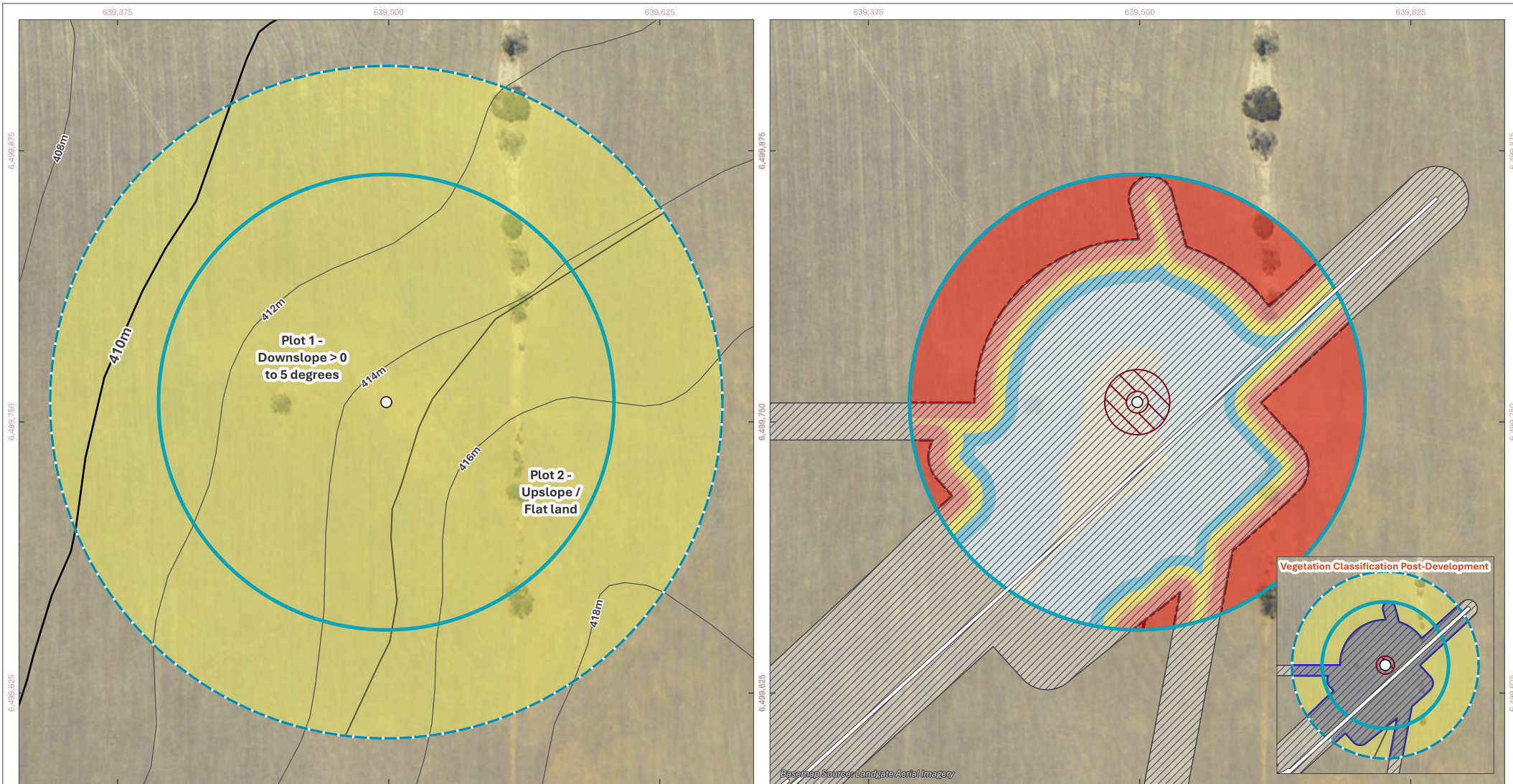


Figure 36: Bushfire Assessment - T26

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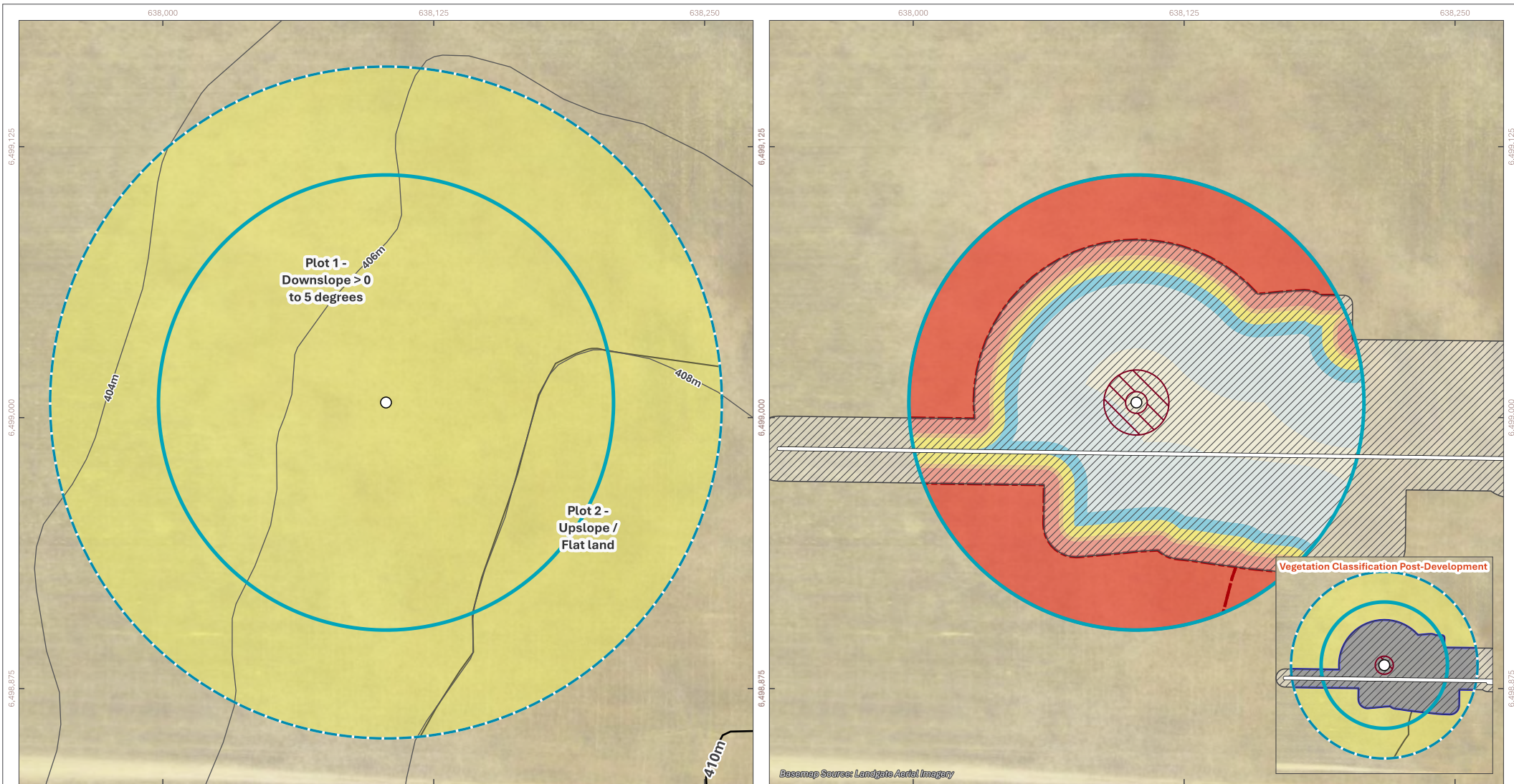


- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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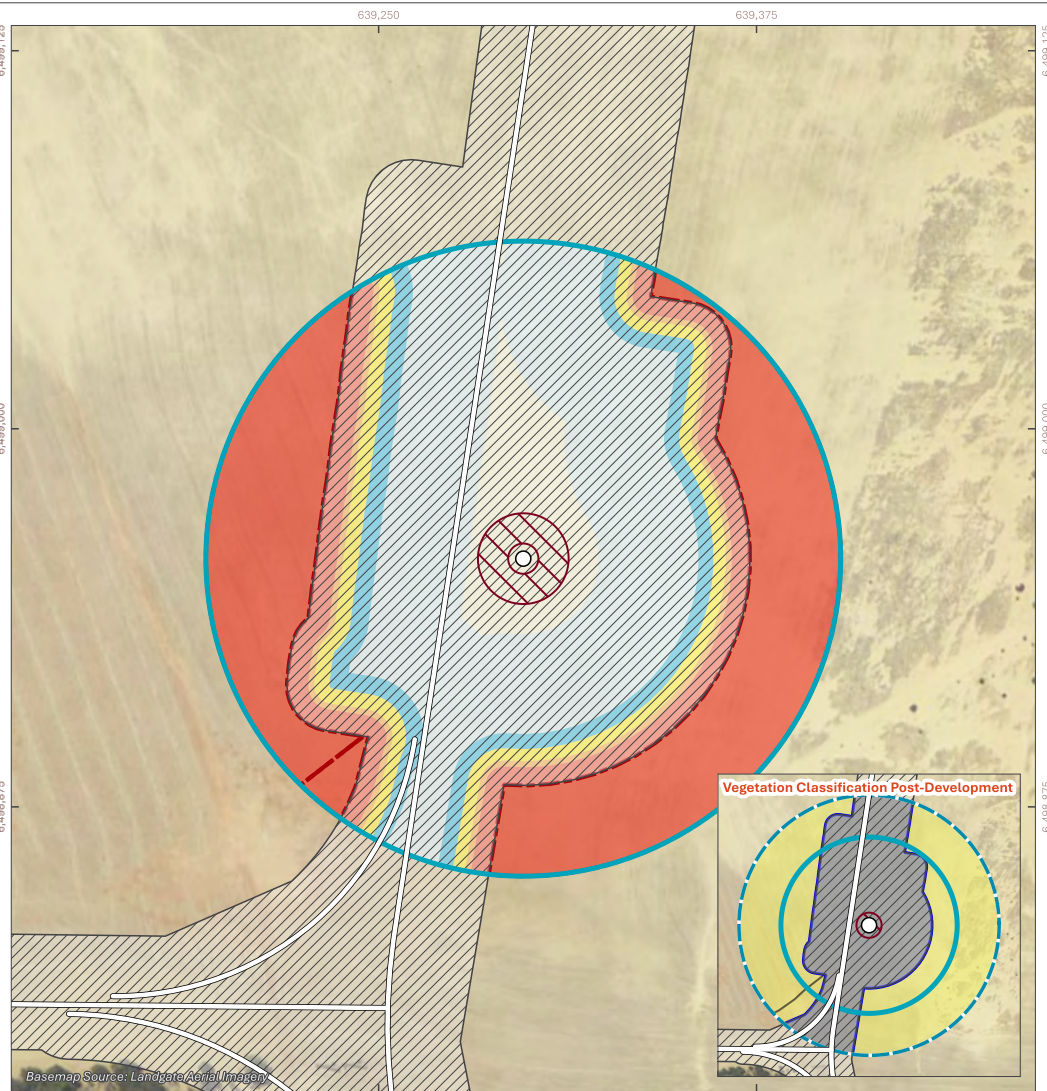
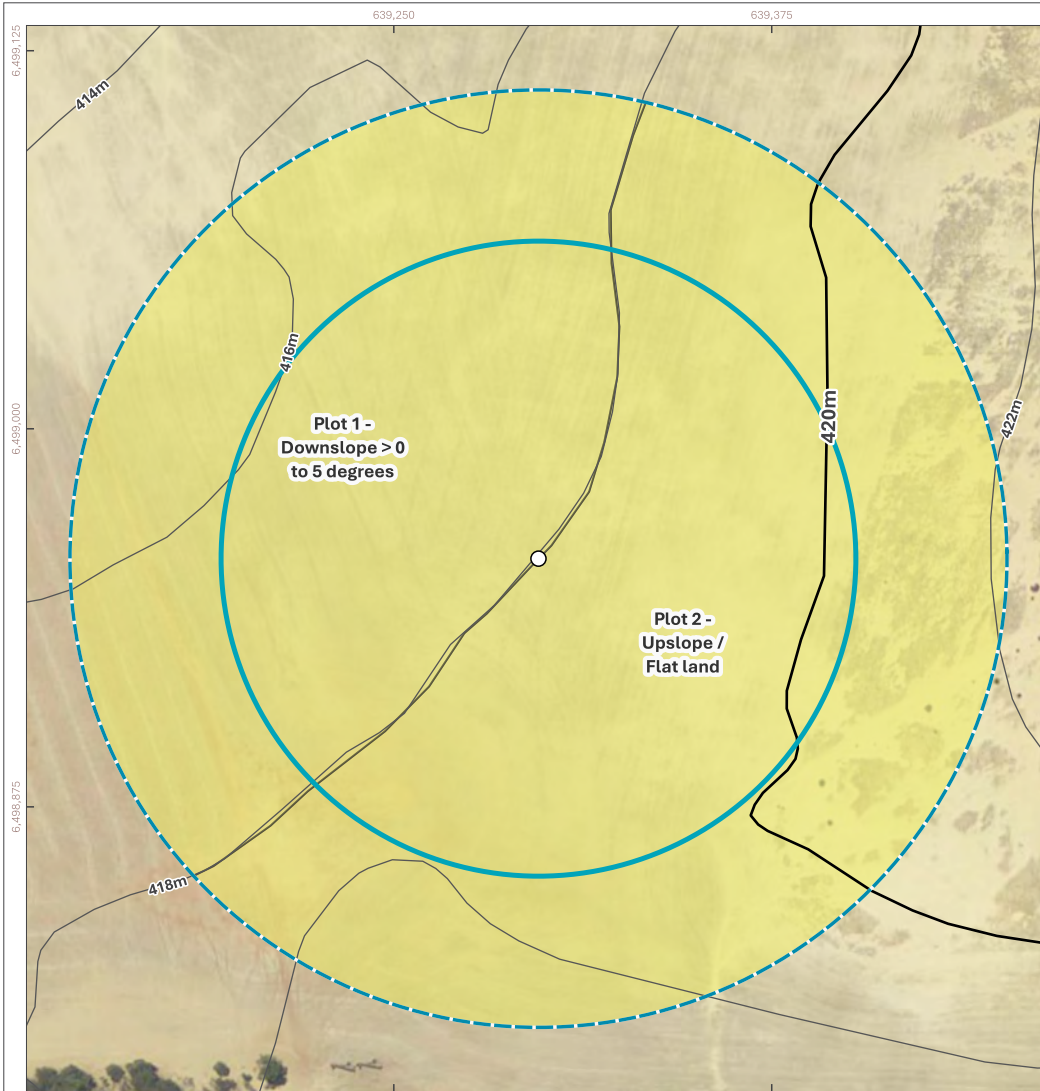
Figure 37: Bushfire Assessment - T27

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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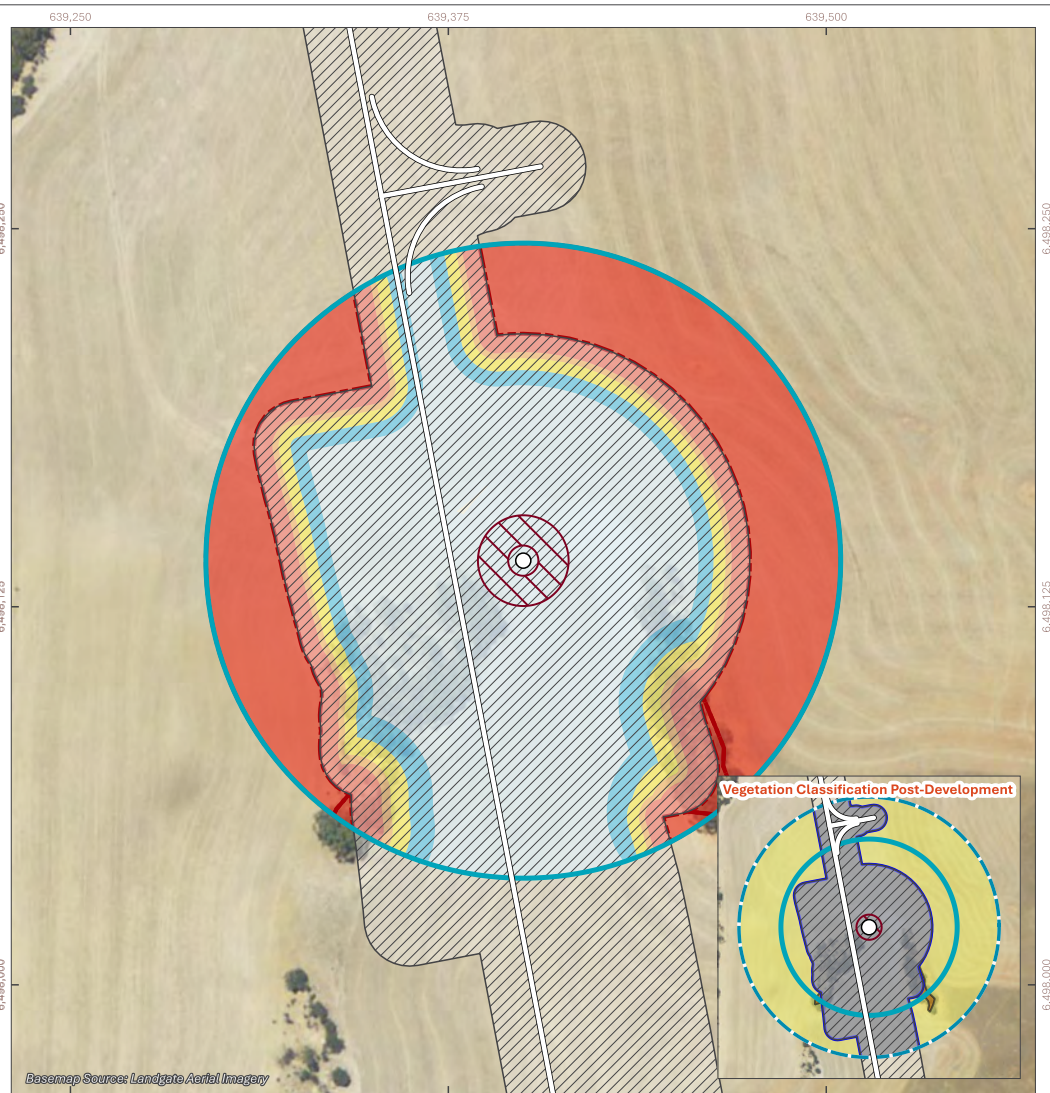
Figure 38: Bushfire Assessment - T28

- Wind Turbine
- Buffer 100m
- - - Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▧ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW




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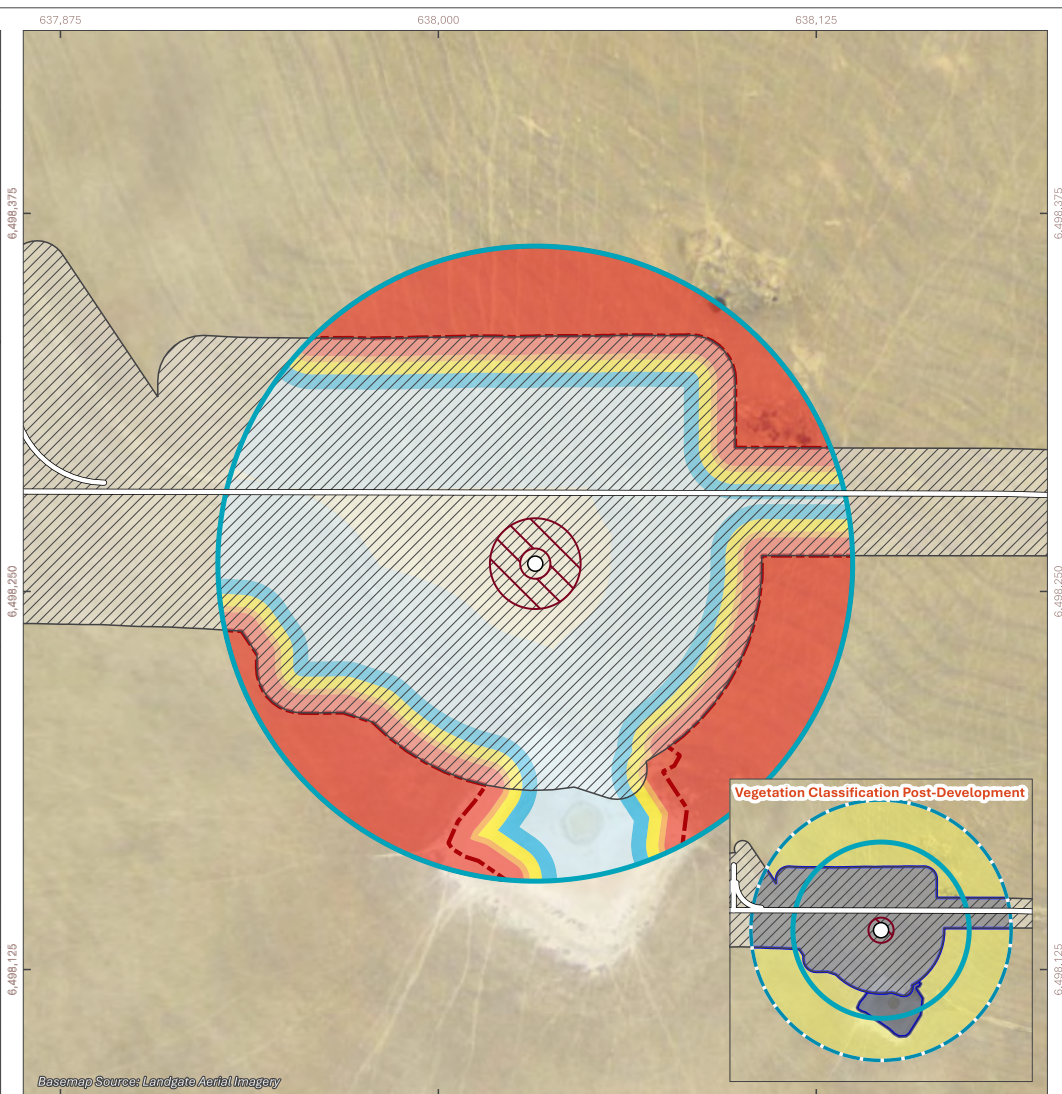
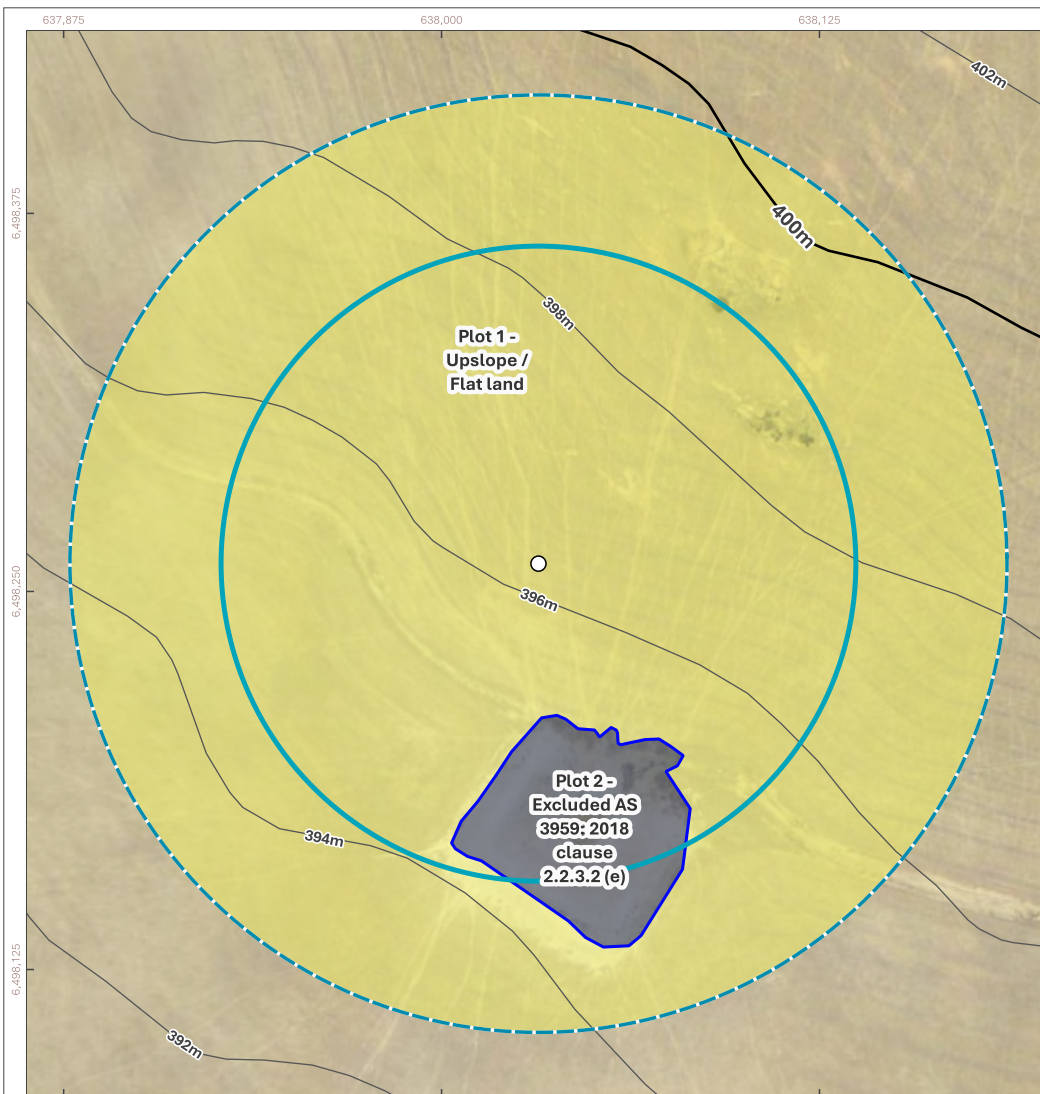
Figure 39: Bushfire Assessment - T29

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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Figure 40: Bushfire Assessment - T30

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW

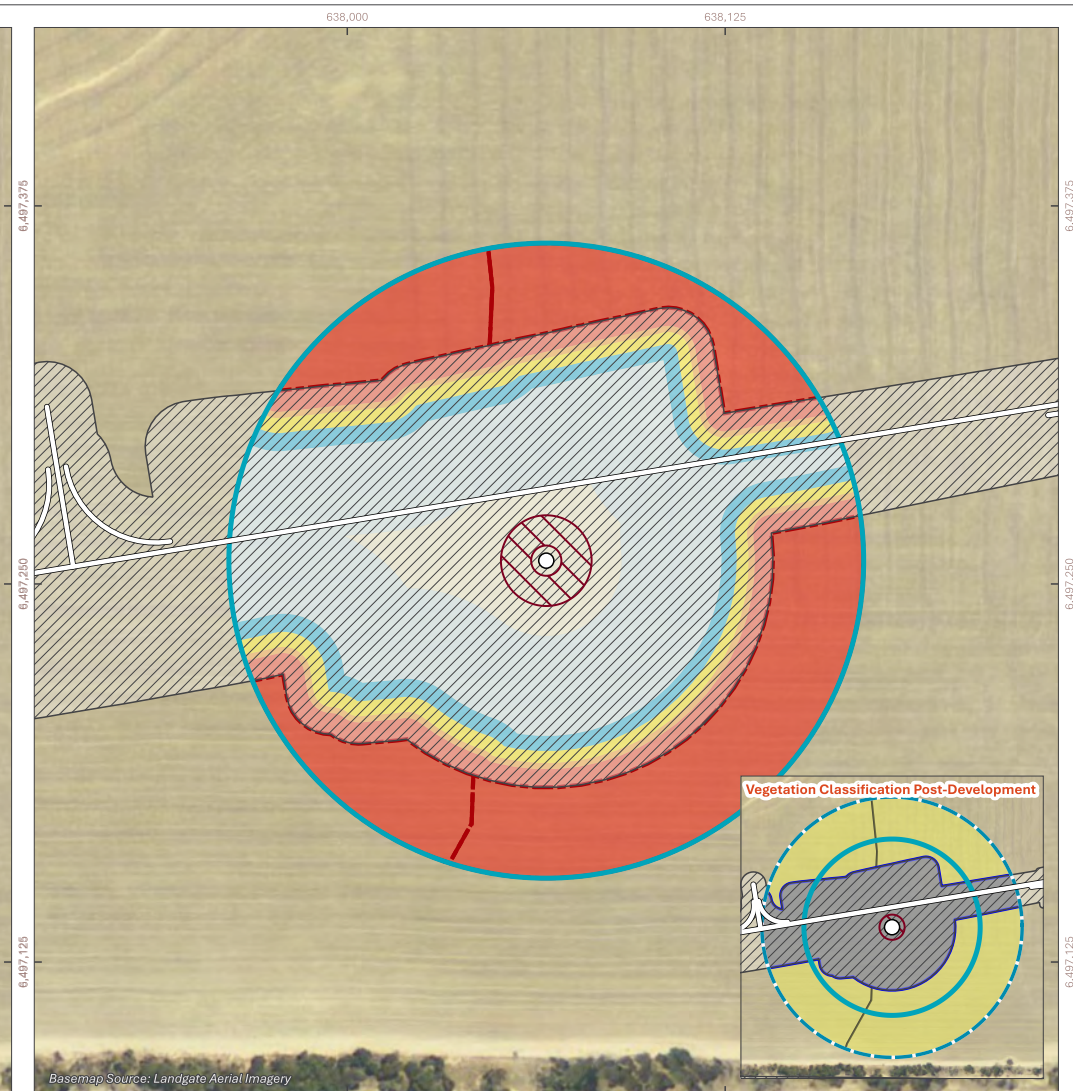
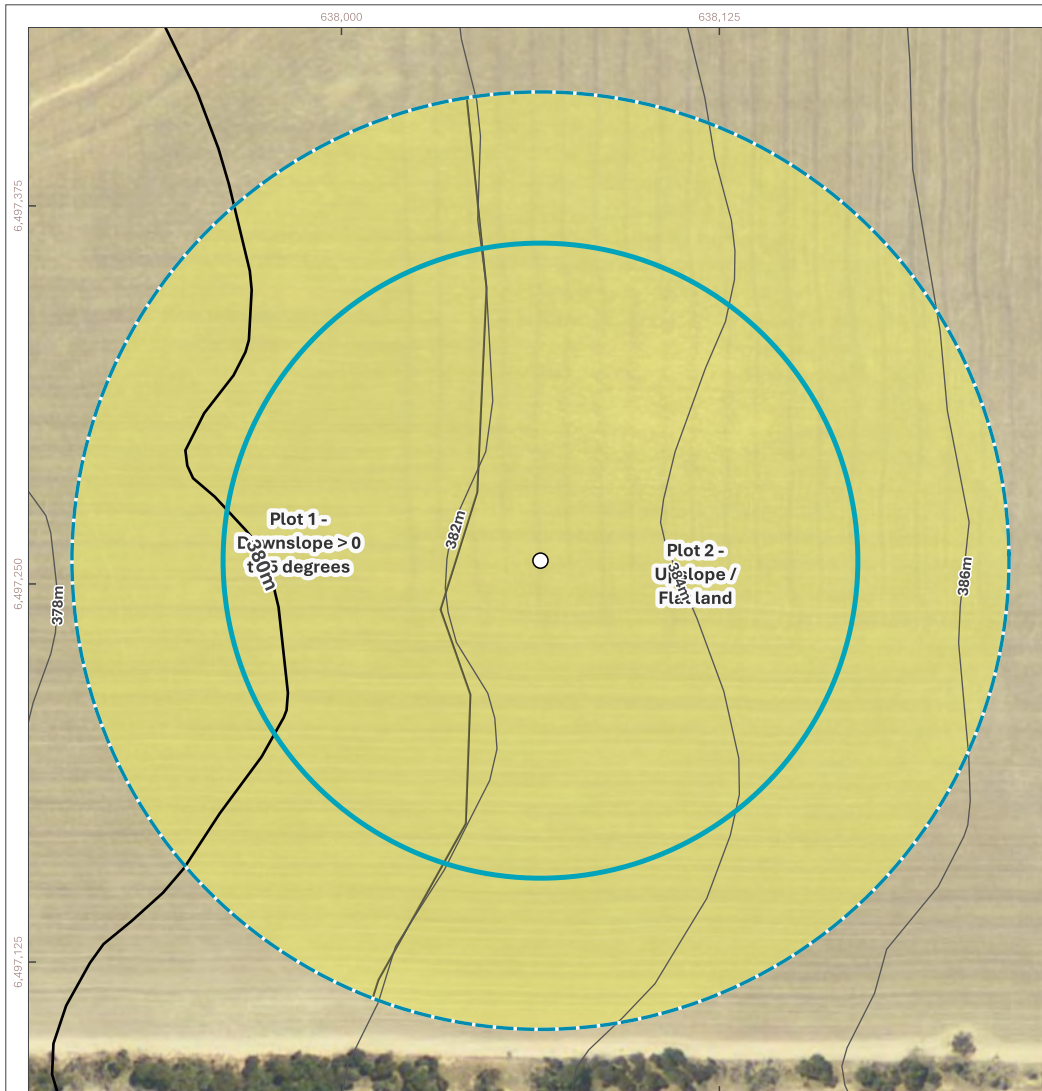
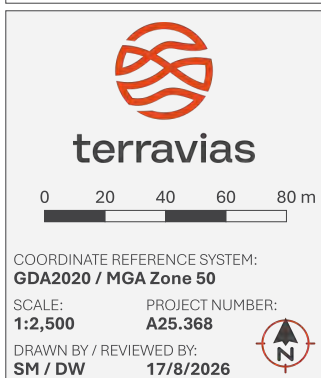


Figure 41: Bushfire Assessment - T31

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- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

Contours (DPIRD-072)

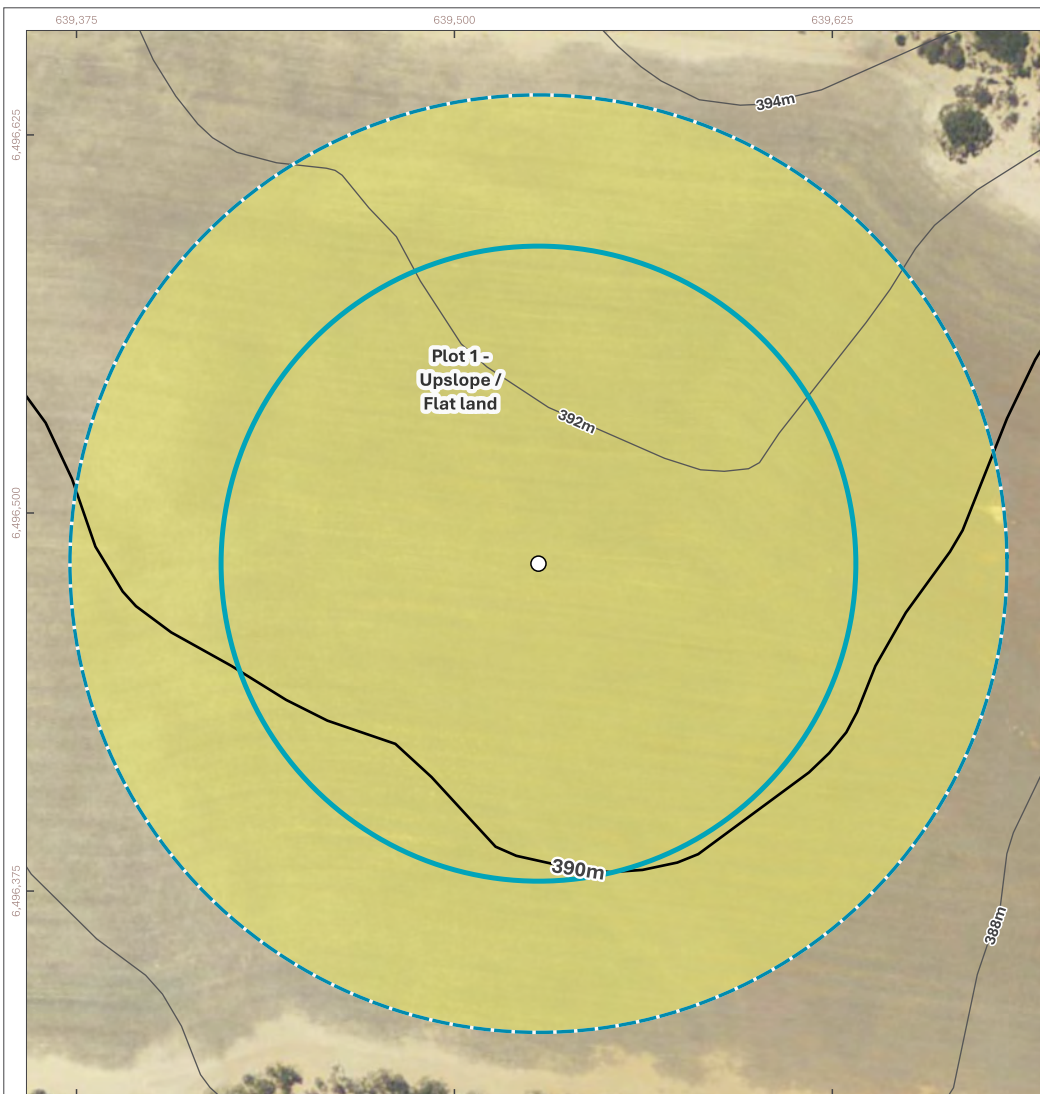
-  2m
 10m
 Access Road
 Indicative Footprint
 Asset Protection Zone (APZ)

Vegetation Classification

-  Class G - Grassland
-  Excluded AS 3959: 2018 2.2.3.2 (e)

Bushfire Attack Level (BAL)

- BAL-FZ
- BAL-40
- BAL-29
- BAL-19
- BAL-12.5
- BAL-LOW



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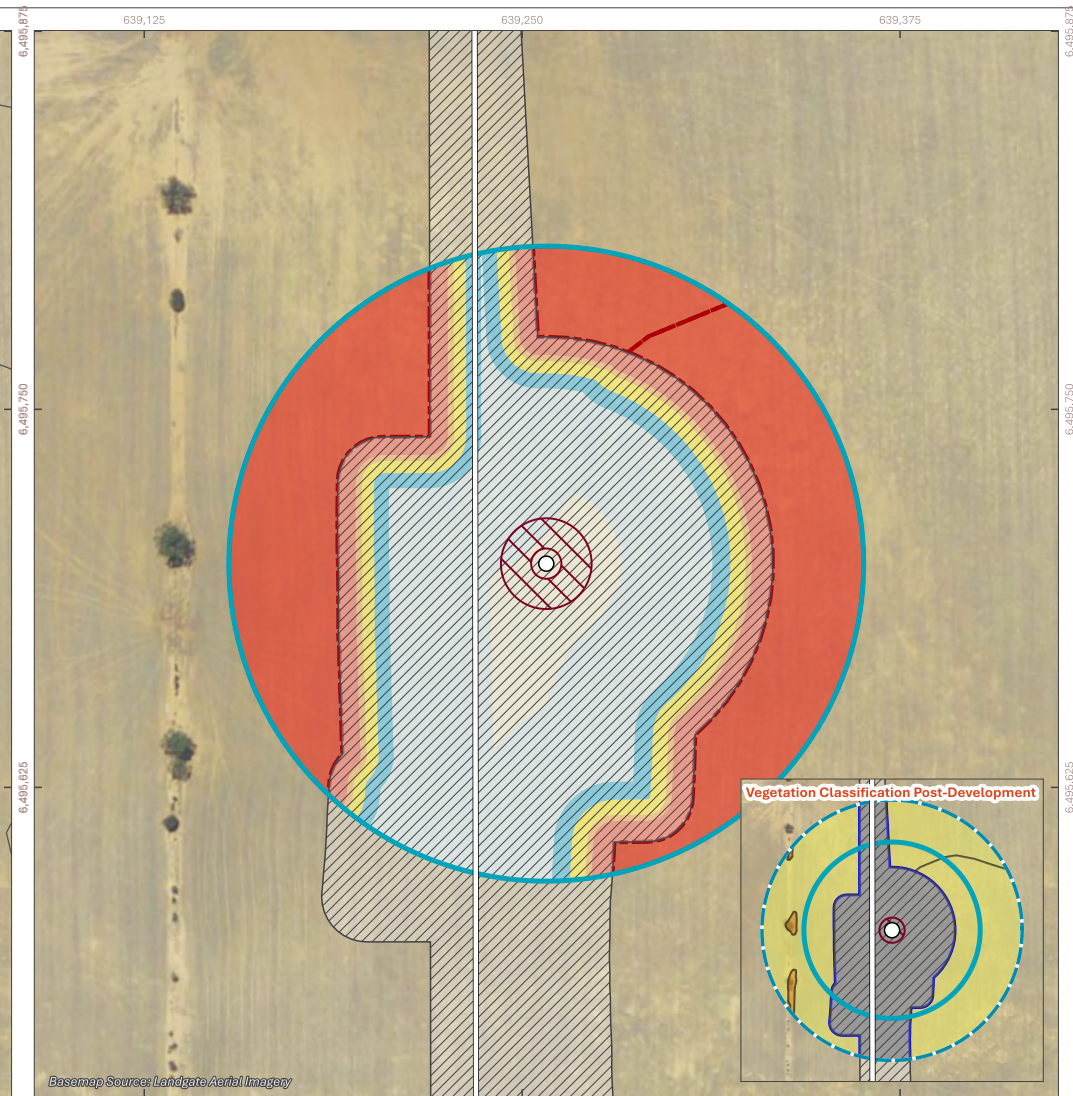
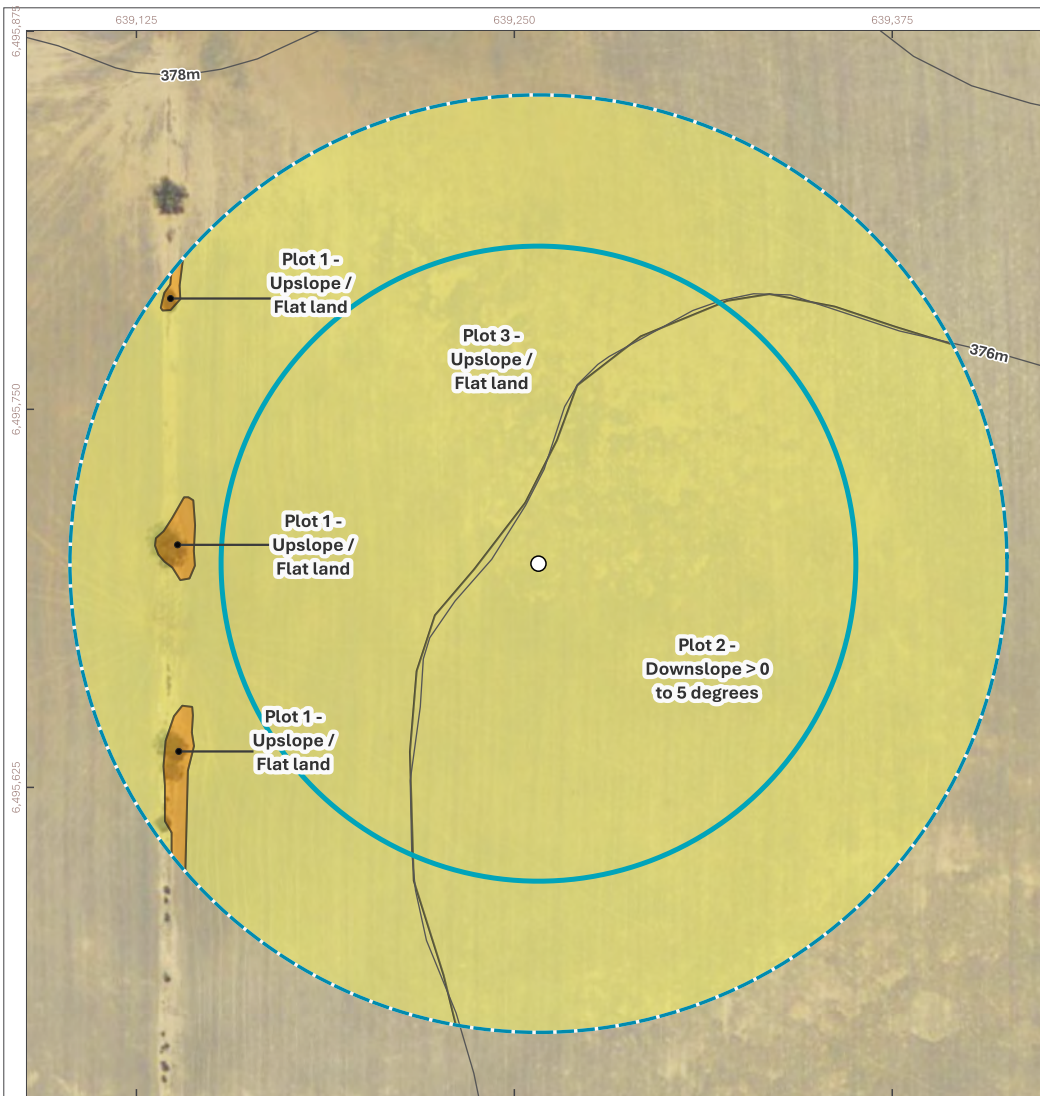
Figure 42: Bushfire Assessment - T32

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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Figure 43: Bushfire Assessment - T33

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW

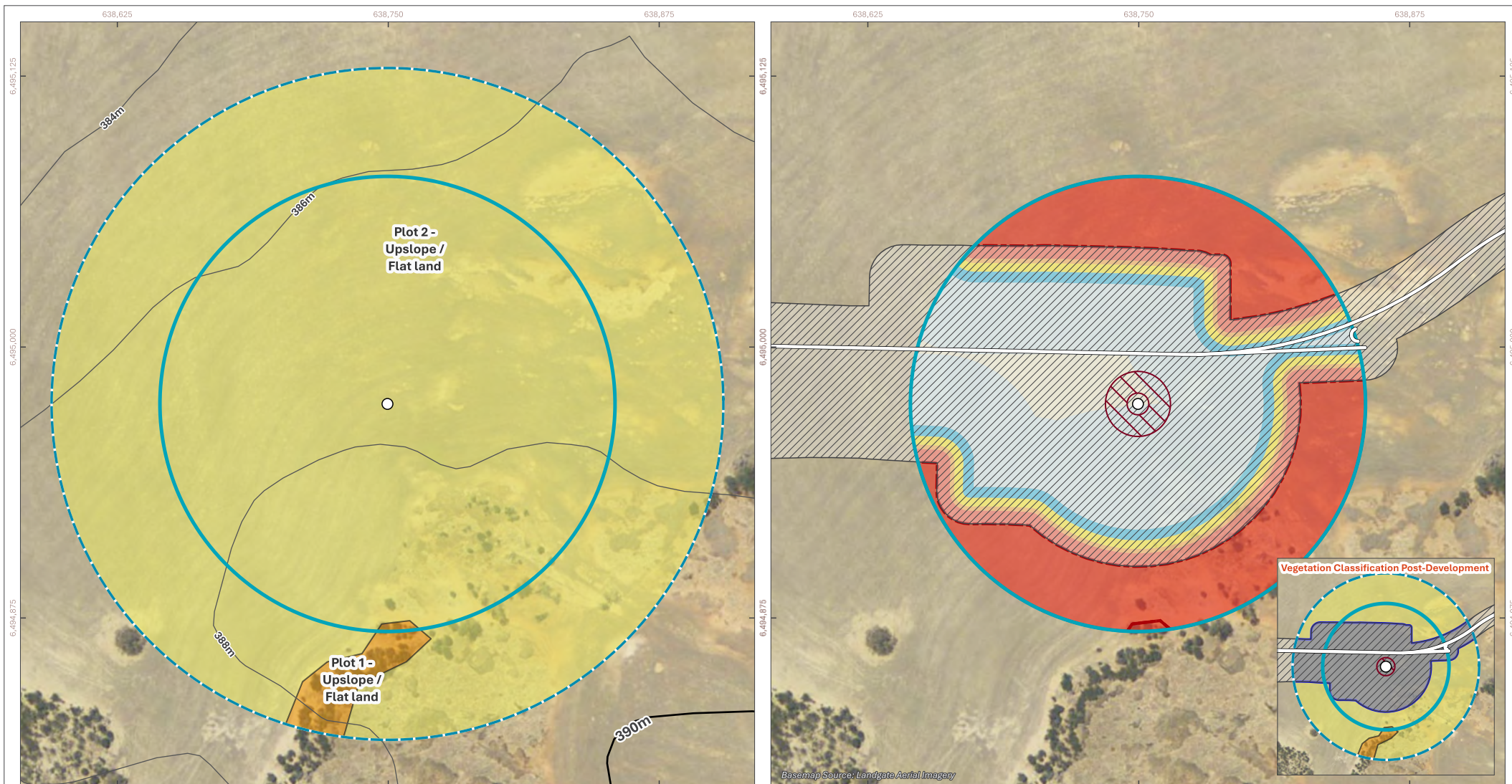


Figure 44: Bushfire Assessment - T34

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0 20 40 60 80 m

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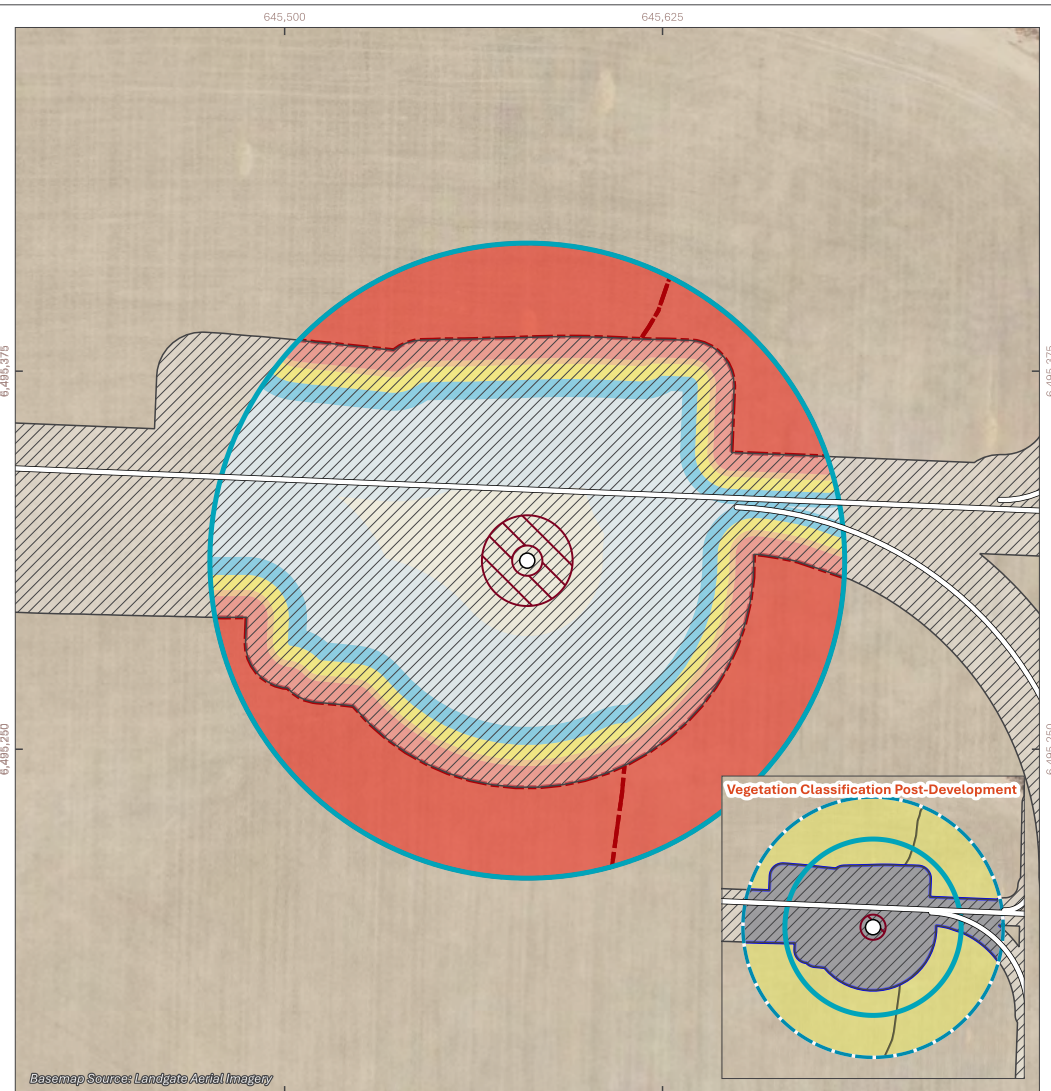
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- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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Figure 45: Bushfire Assessment - T35

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW

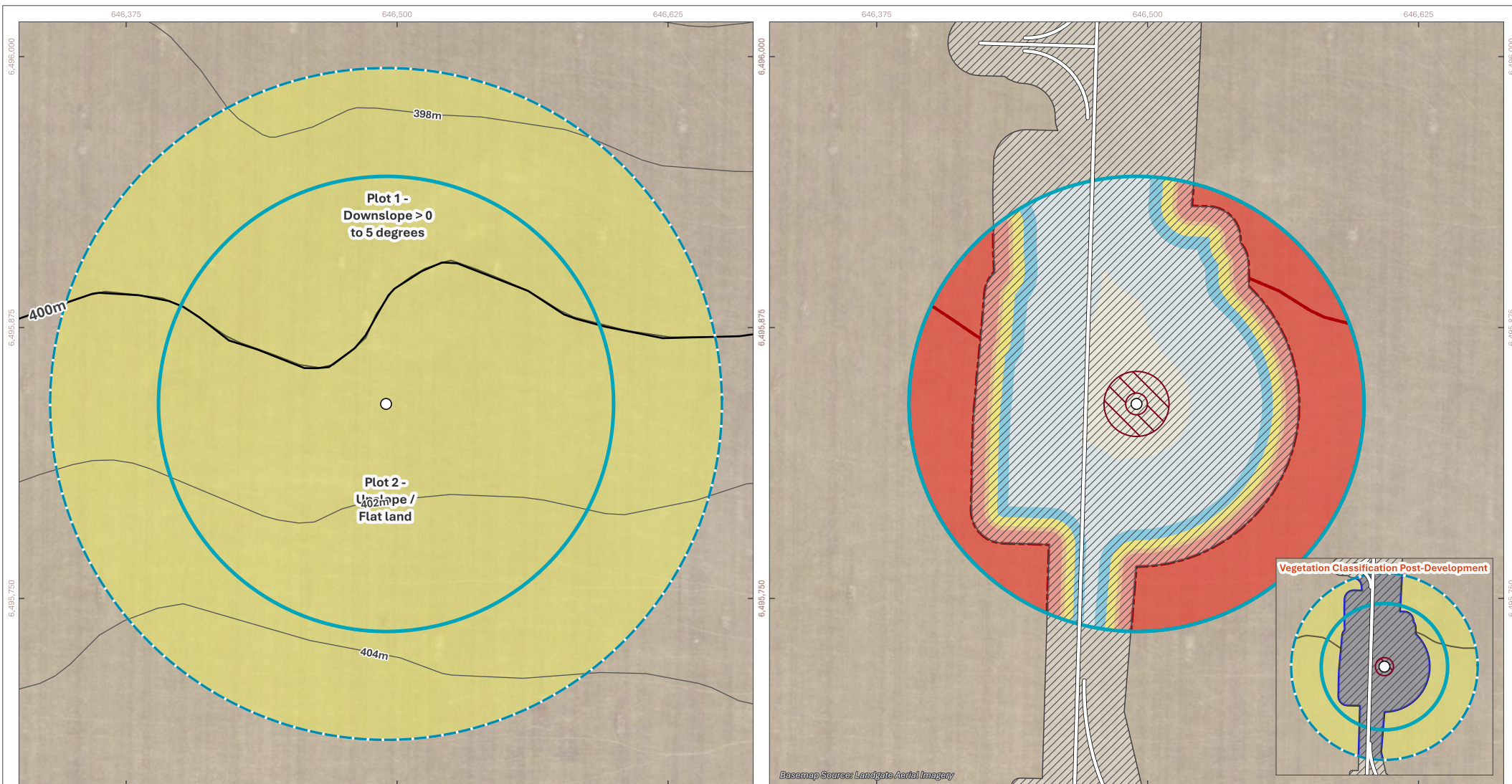


Figure 46: Bushfire Assessment - T36


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0 20 40 60 80 m

COORDINATE REFERENCE SYSTEM:
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SCALE: PROJECT NUMBER:
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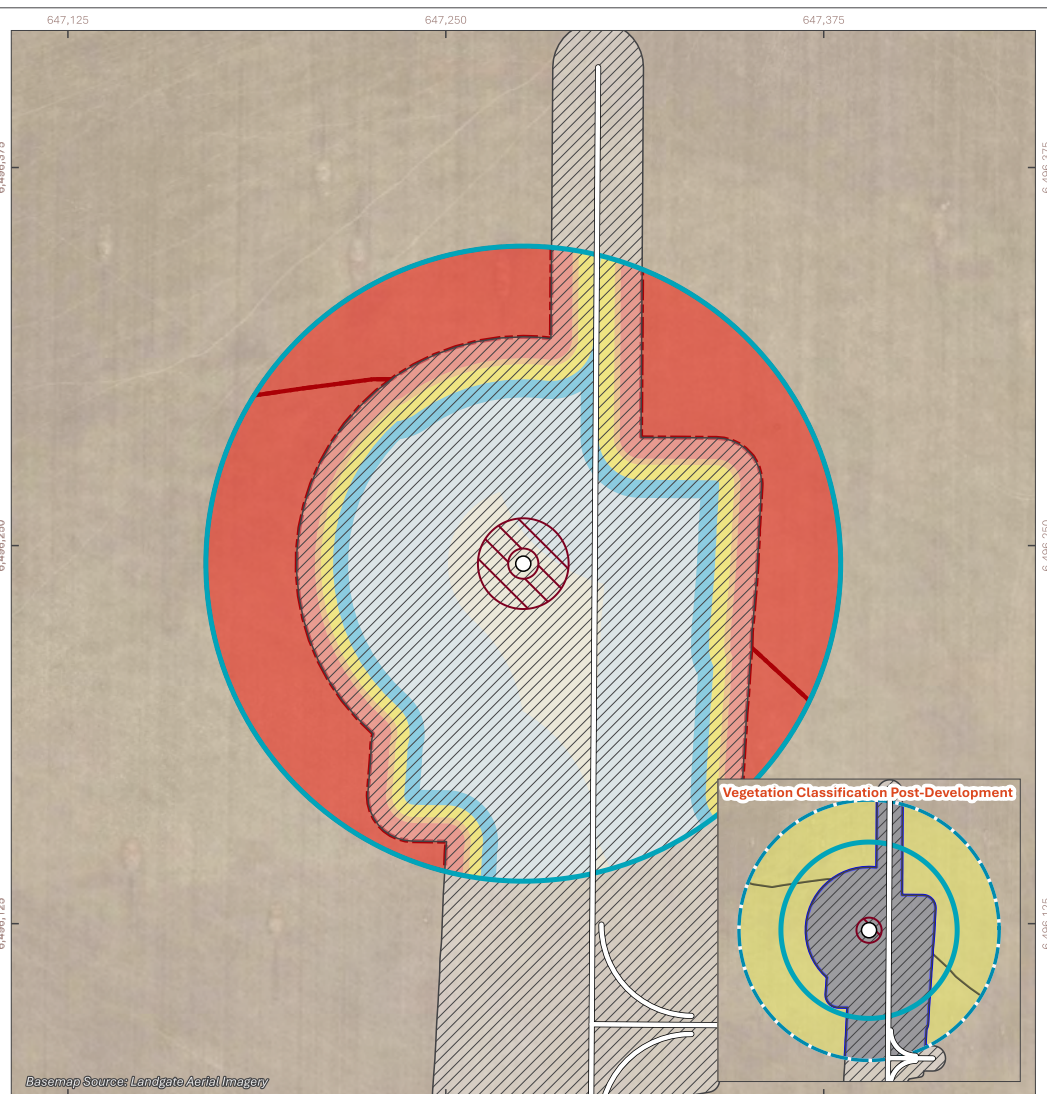


- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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COORDINATE REFERENCE SYSTEM:
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Figure 47: Bushfire Assessment - T37

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▧ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW

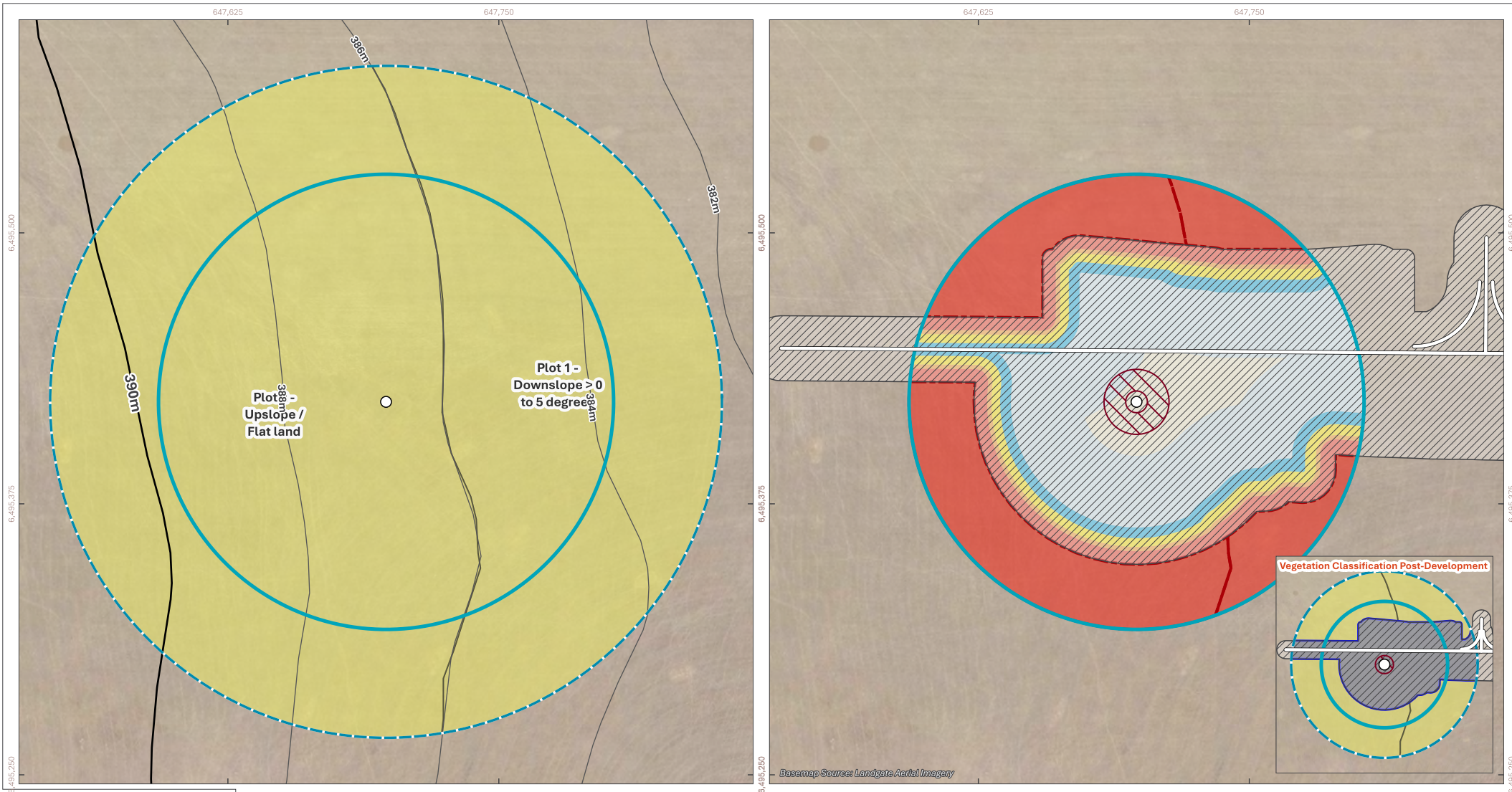


Figure 48: Bushfire Assessment - T38

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0 20 40 60 80 m

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- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW

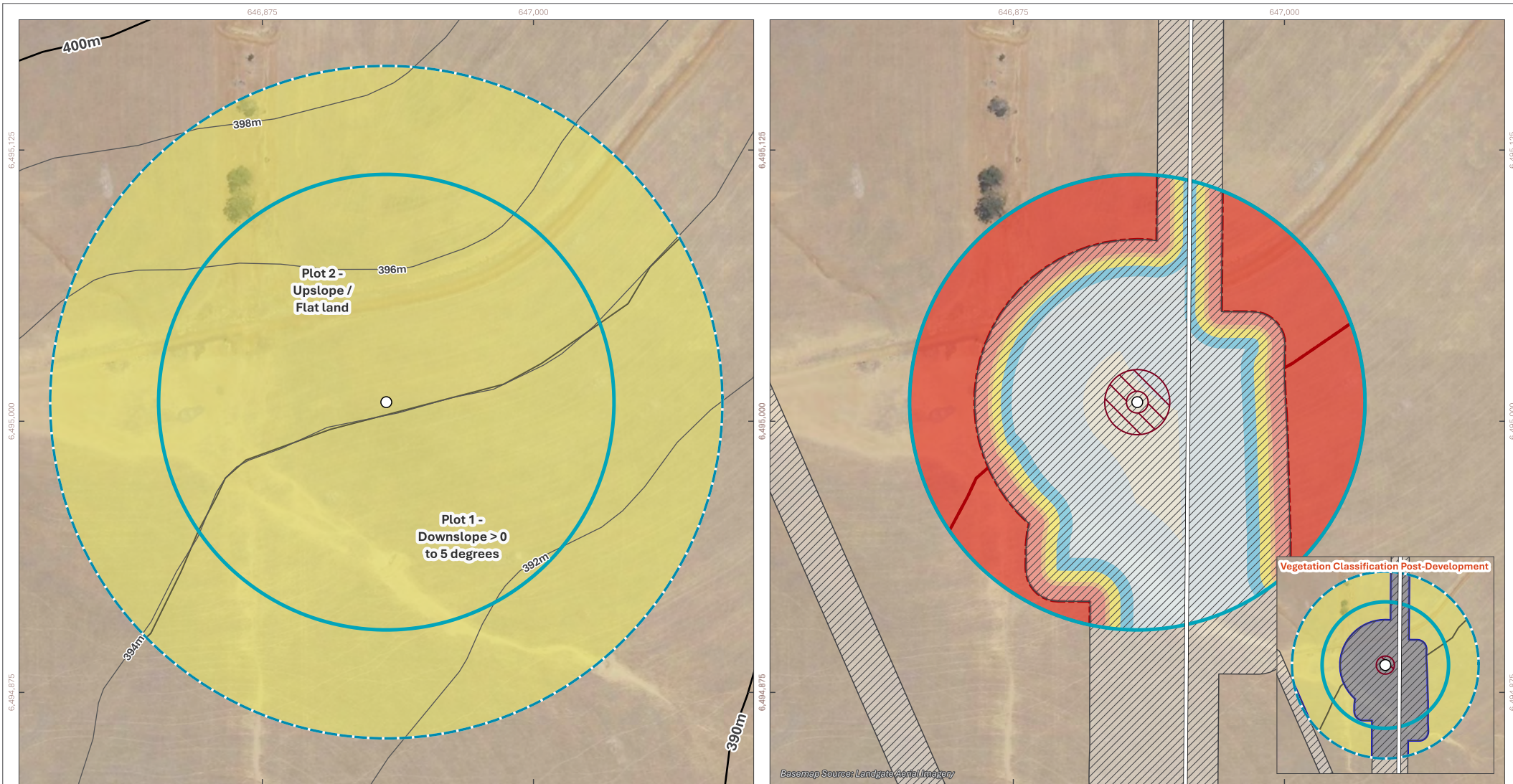


Figure 49: Bushfire Assessment - T39

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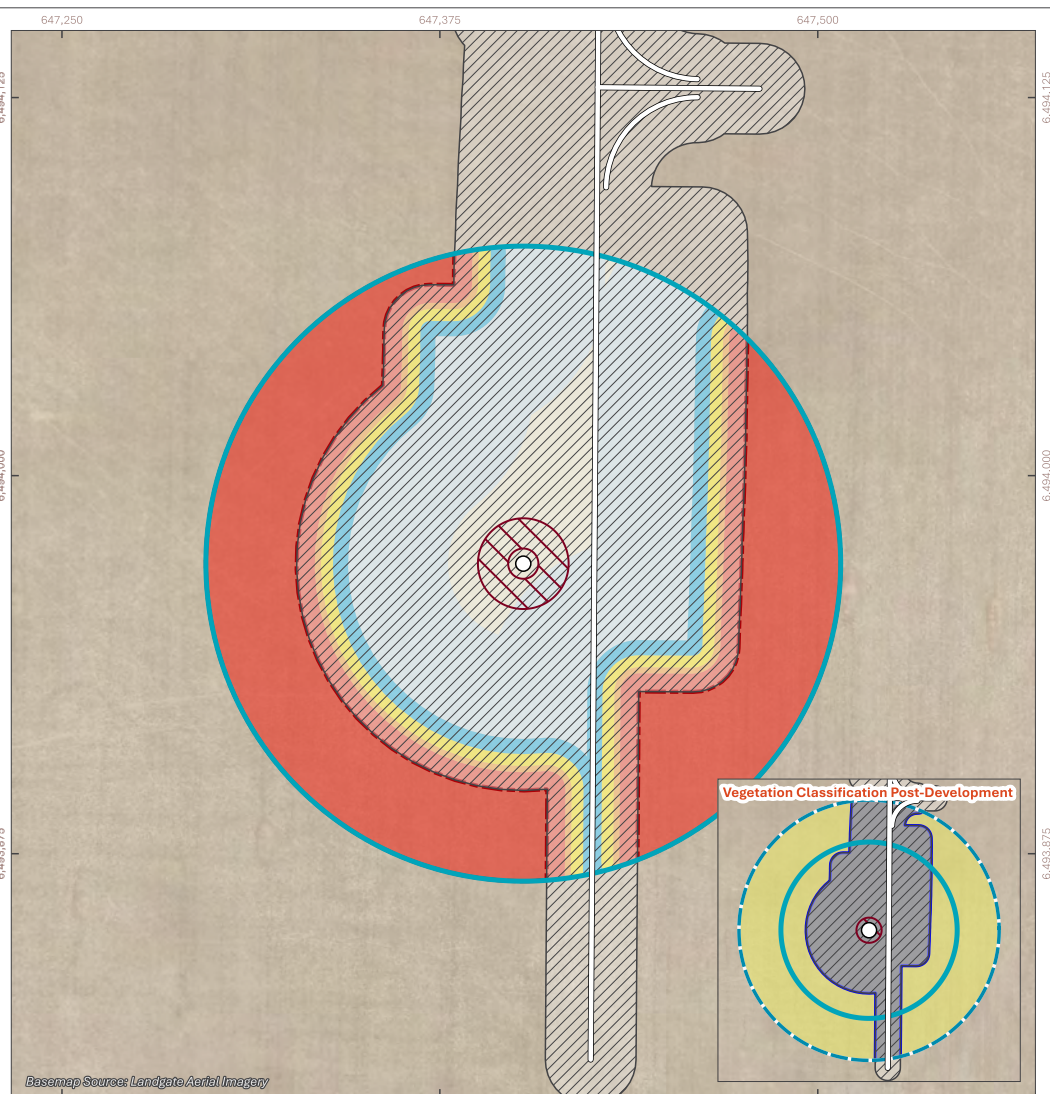
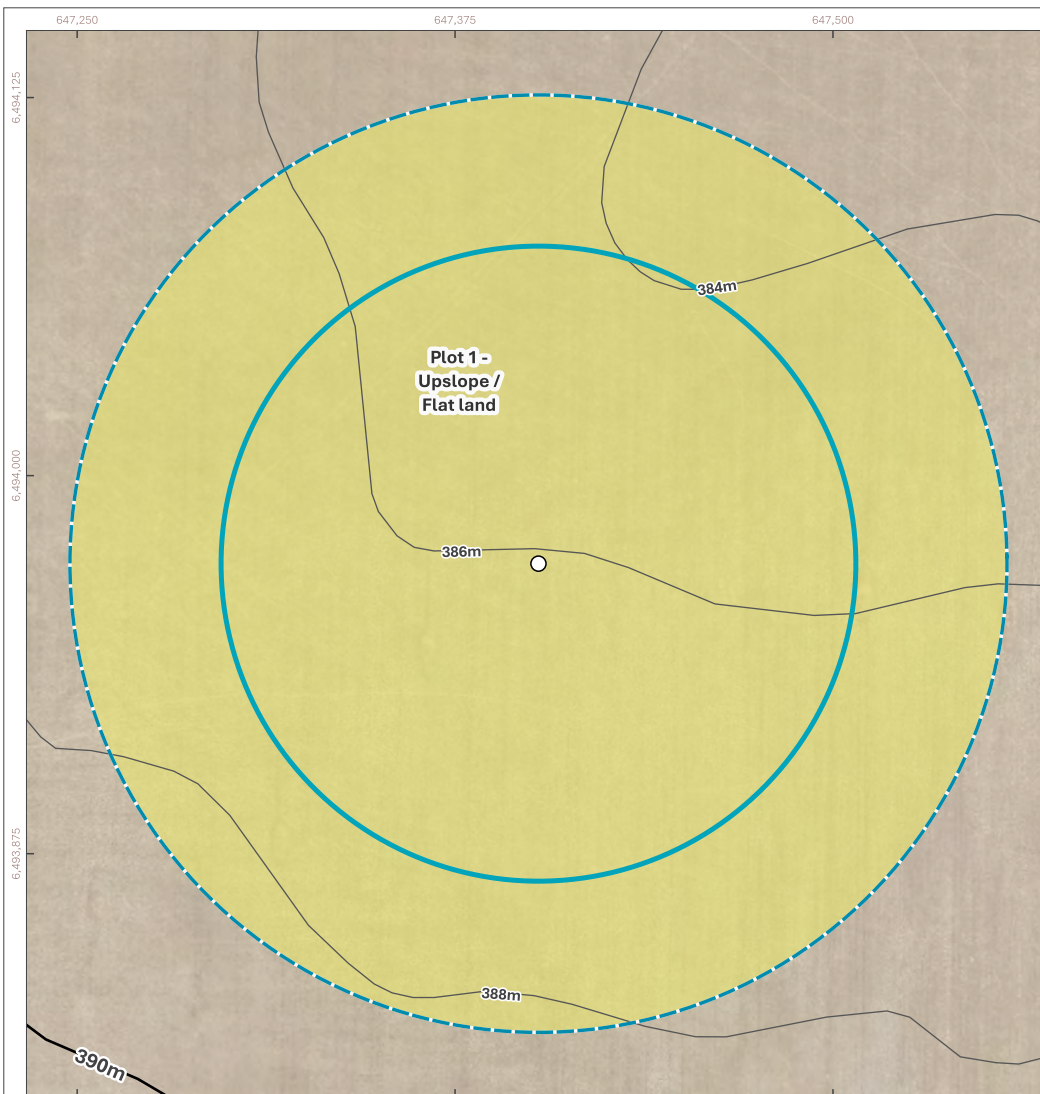


- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW




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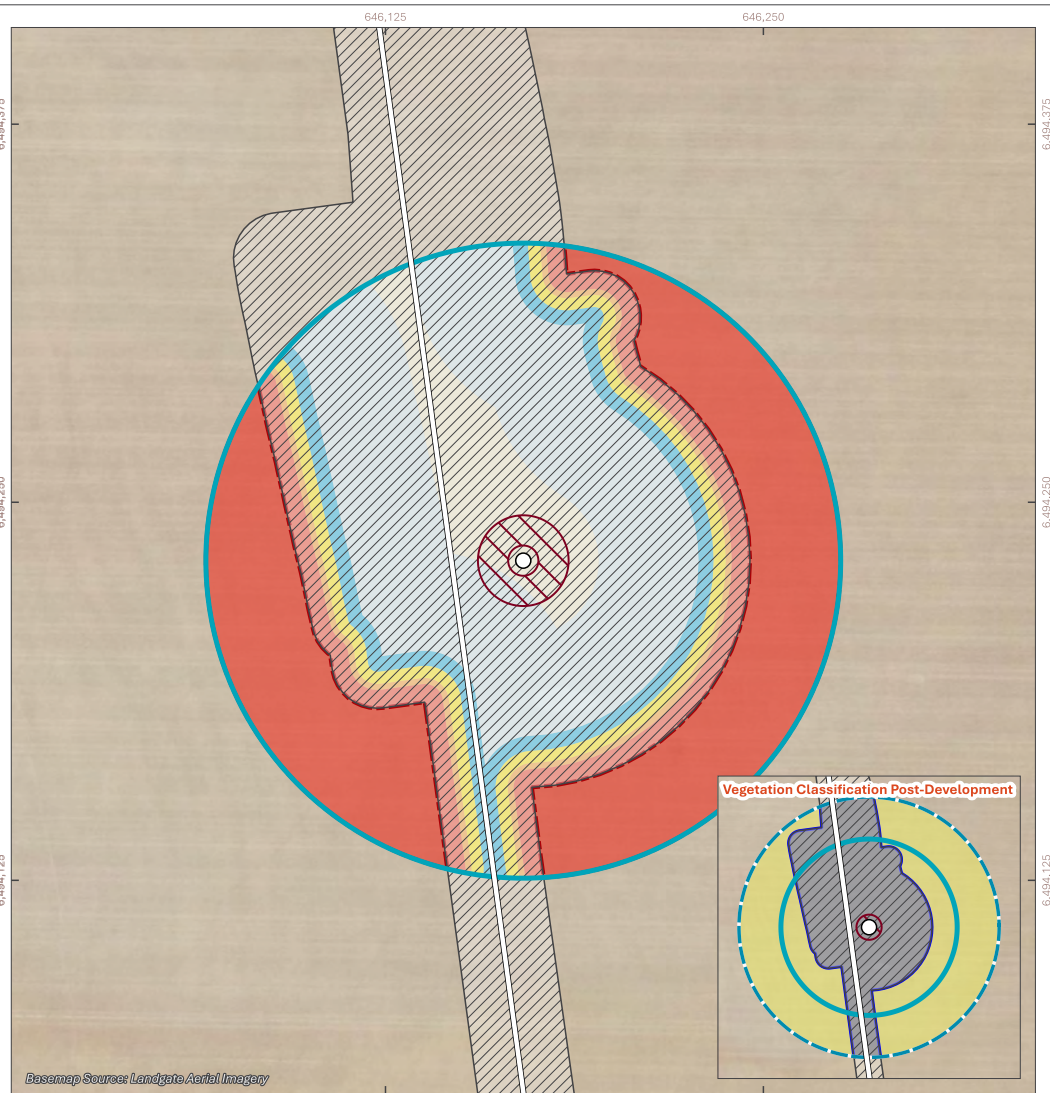
Figure 50: Bushfire Assessment - T40

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW



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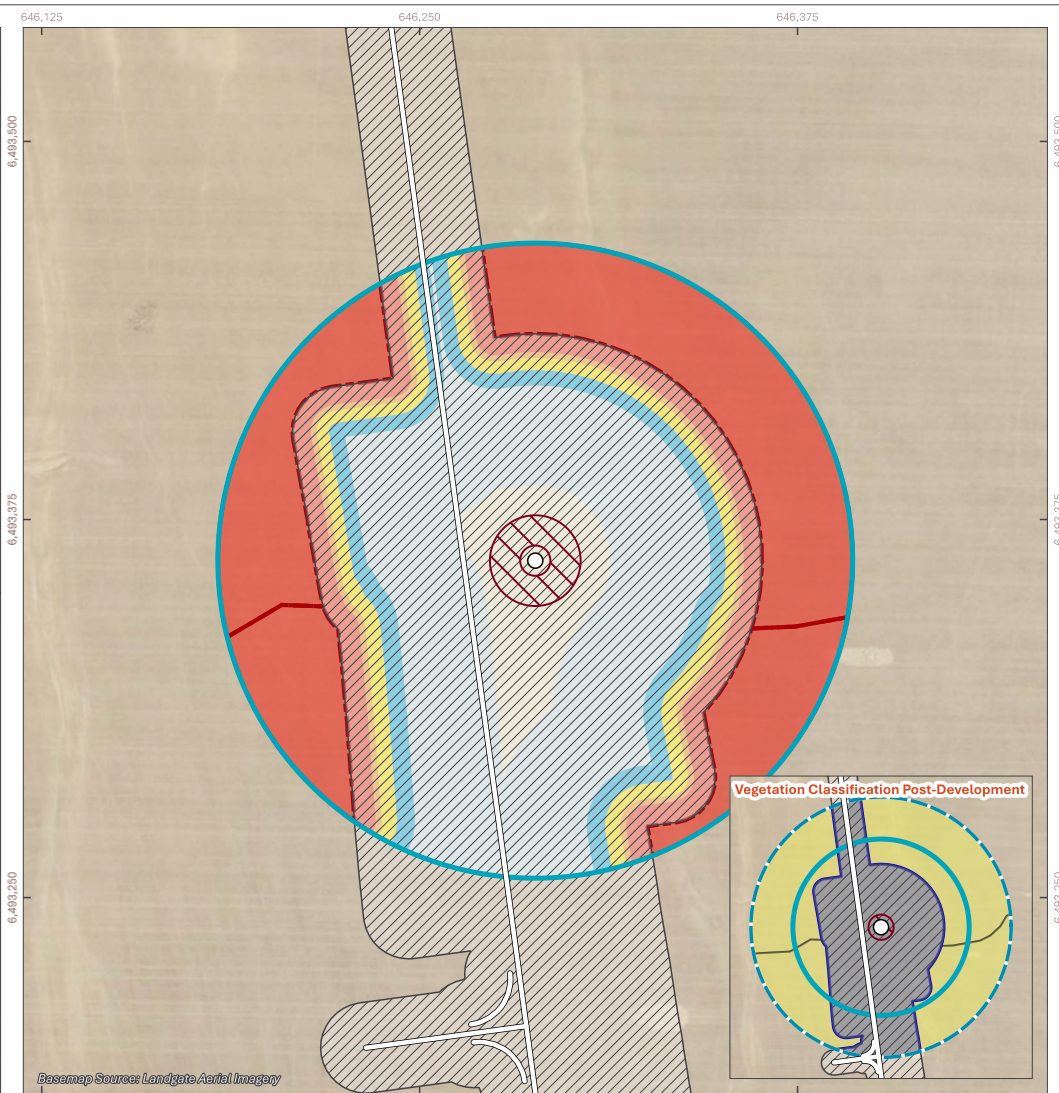
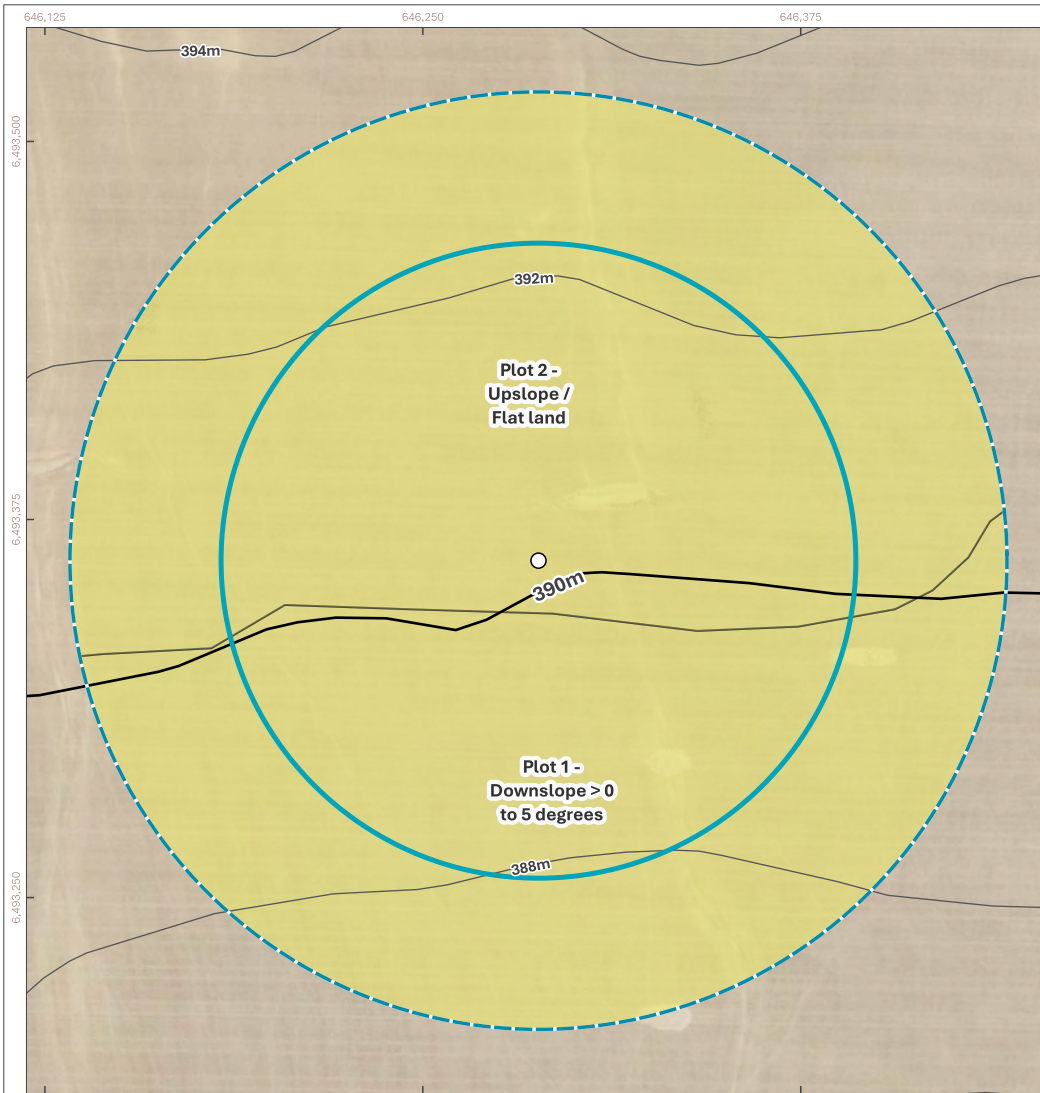
Figure 51: Bushfire Assessment - T41

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - Access Road
 - ▨ Indicative Footprint
 - ▧ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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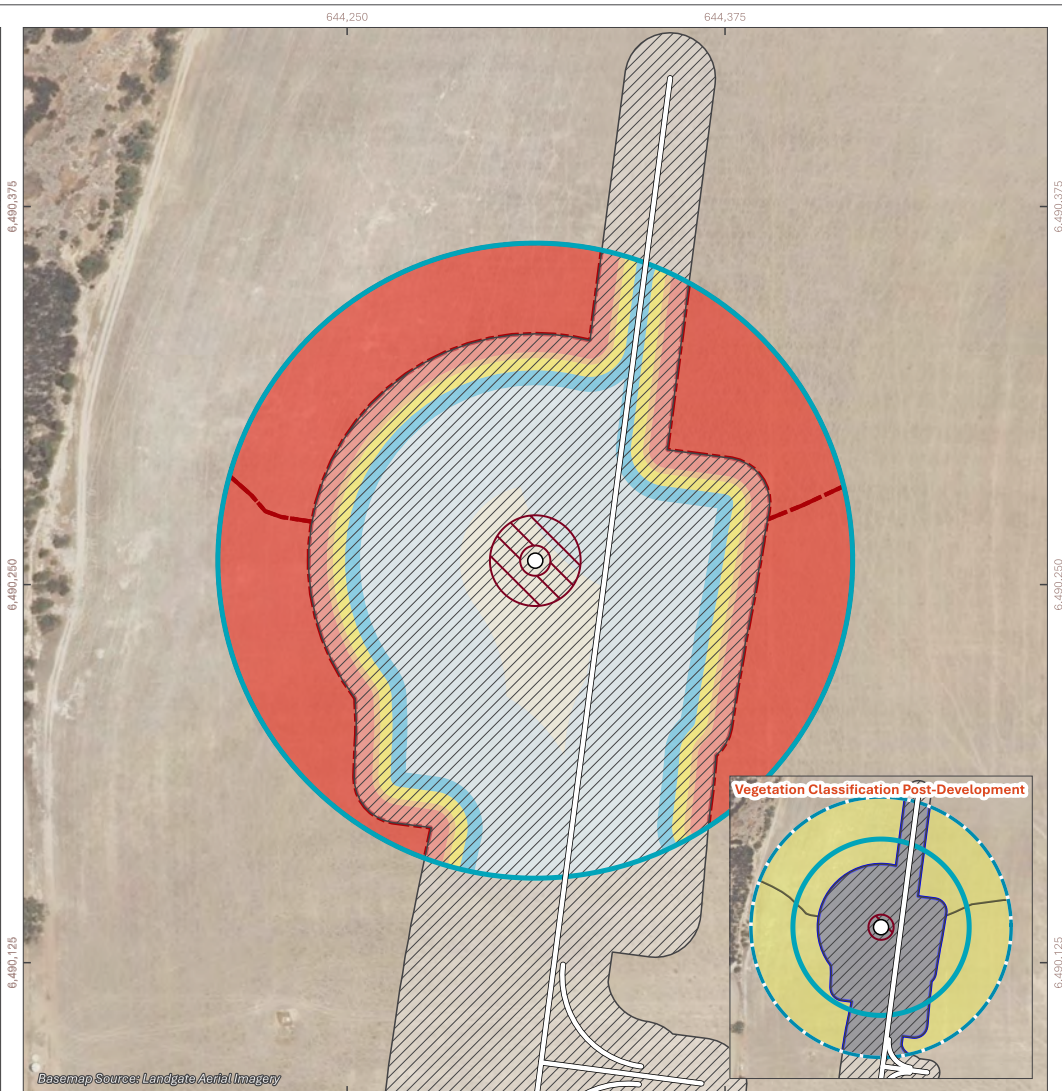
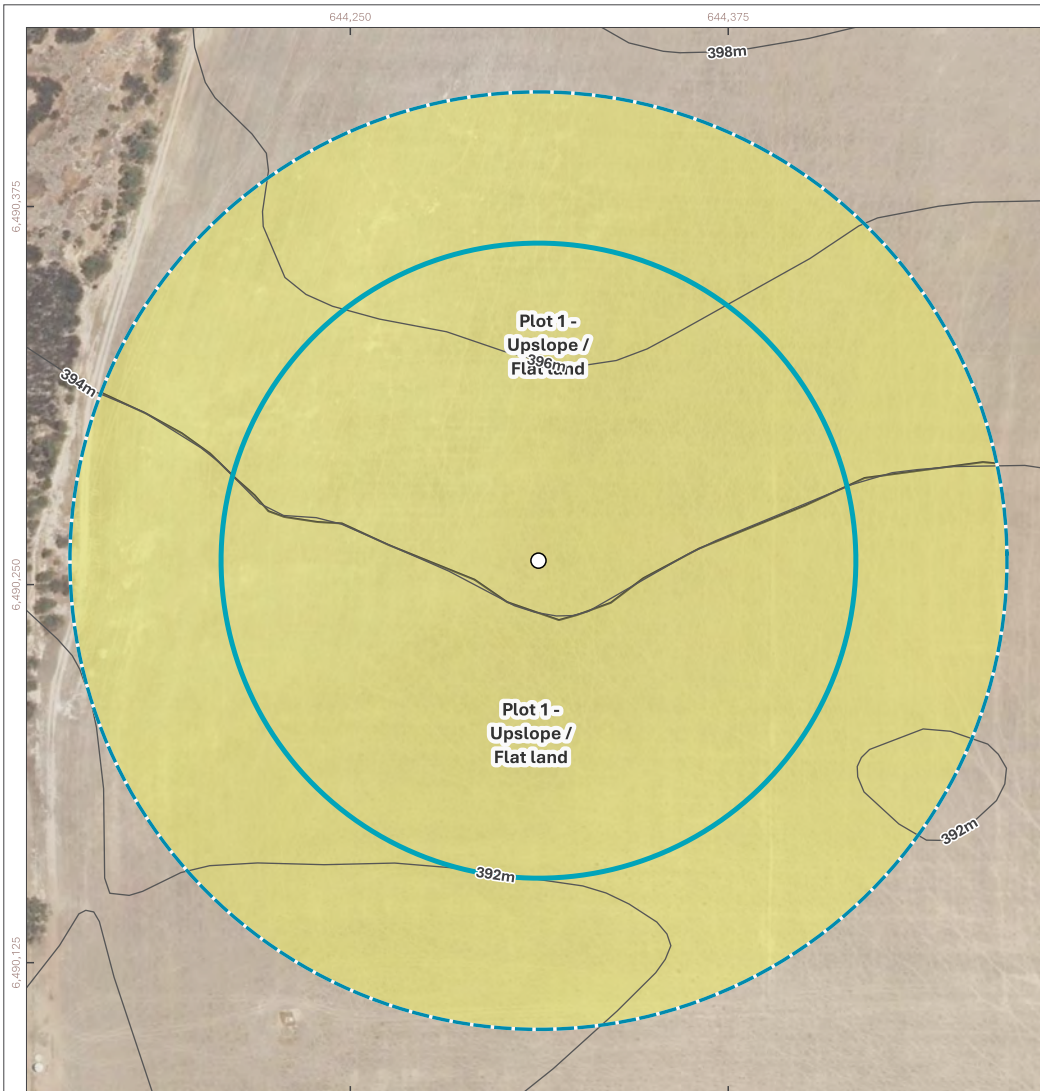
Figure 52: Bushfire Assessment - T42

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW



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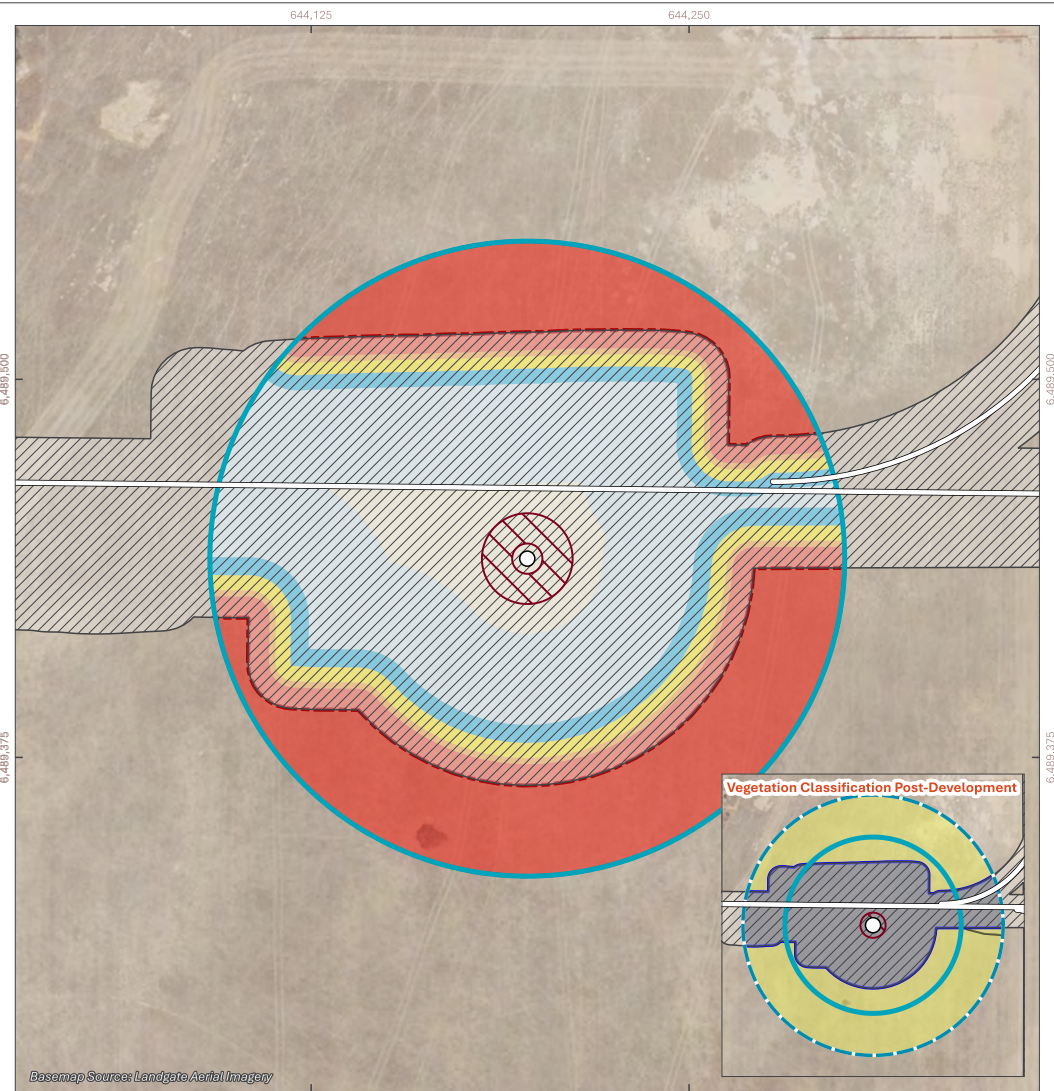
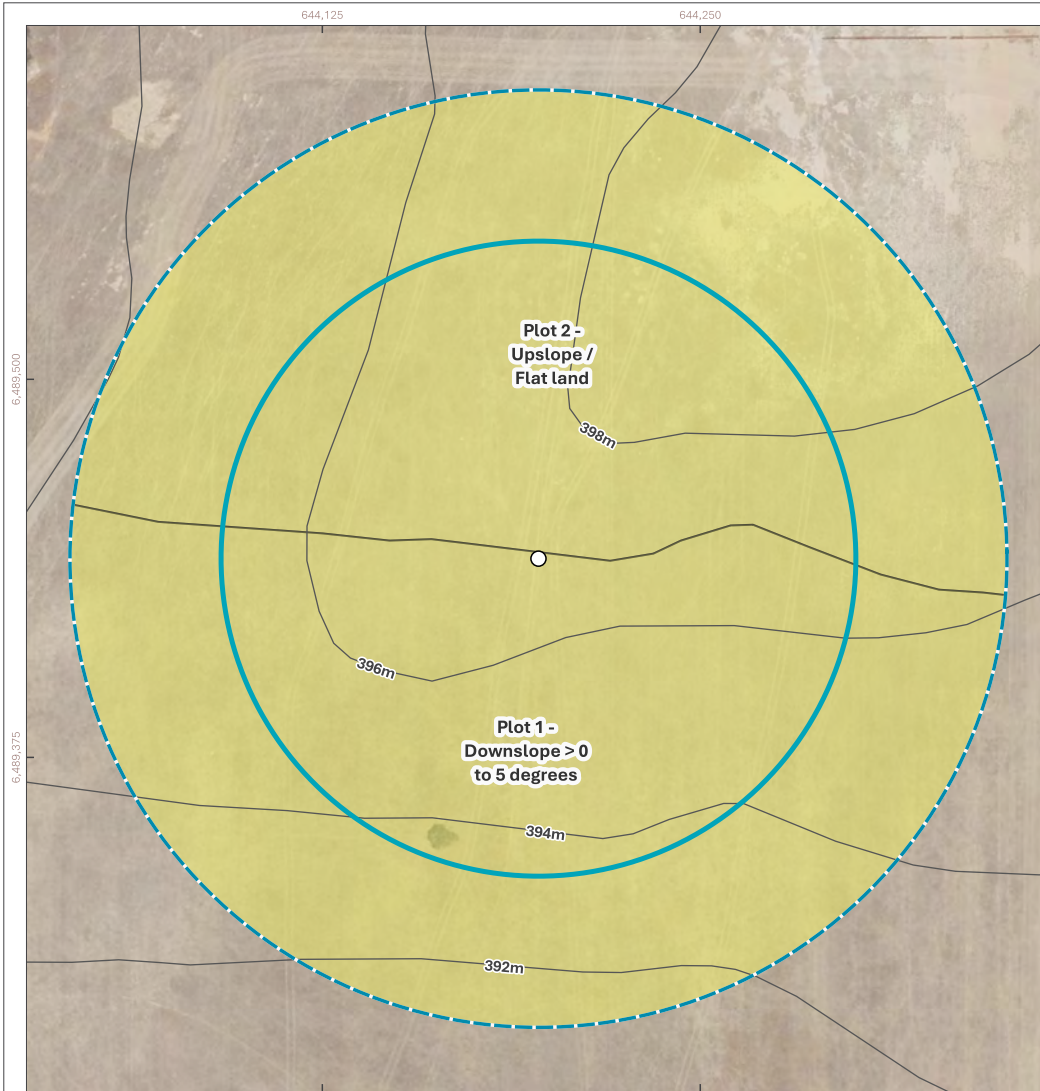
Figure 54: Bushfire Assessment - T44

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▨ Class G - Grassland
 - ▨ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▨ BAL-FZ
 - ▨ BAL-40
 - ▨ BAL-29
 - ▨ BAL-19
 - ▨ BAL-12.5
 - ▨ BAL-LOW



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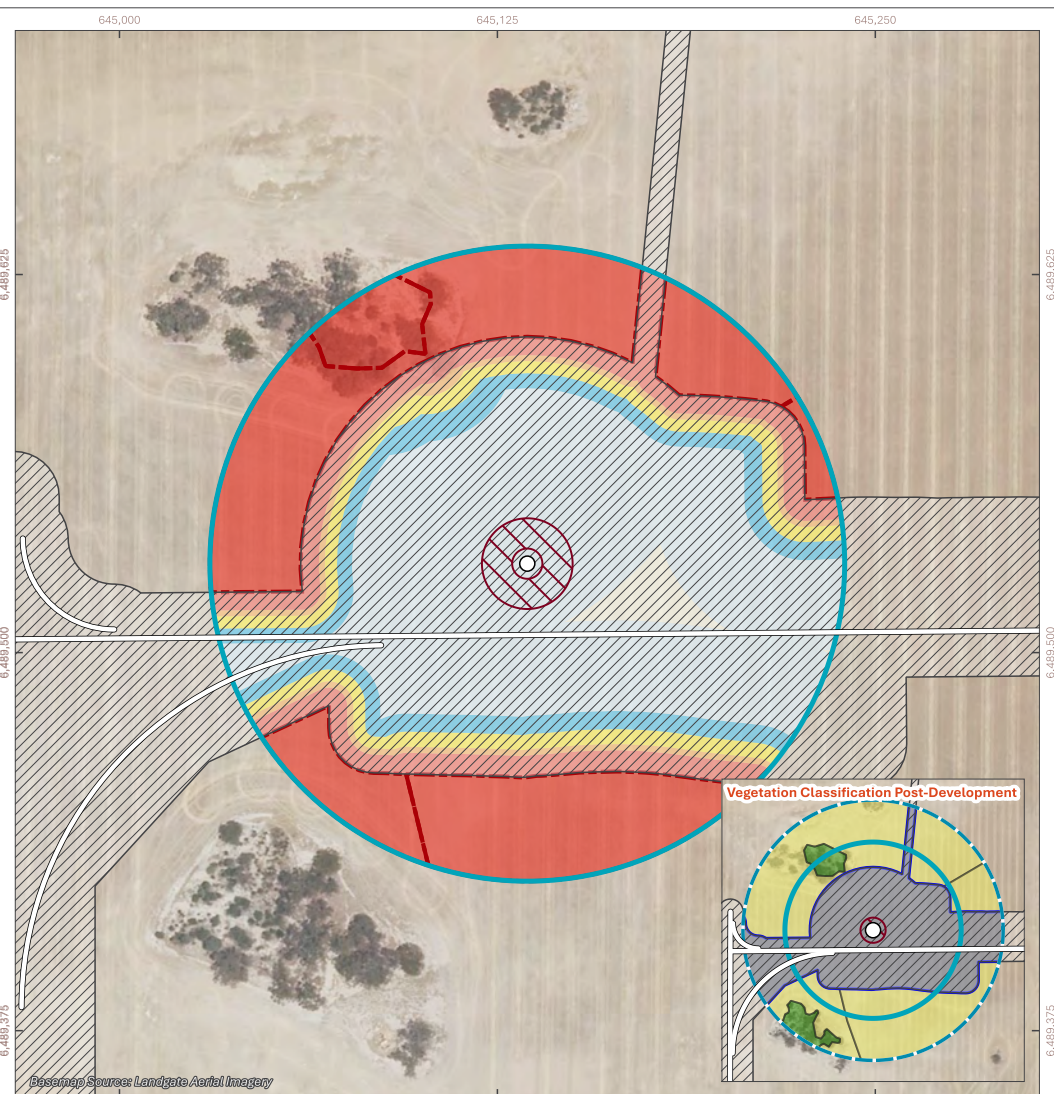
Figure 55: Bushfire Assessment - T45

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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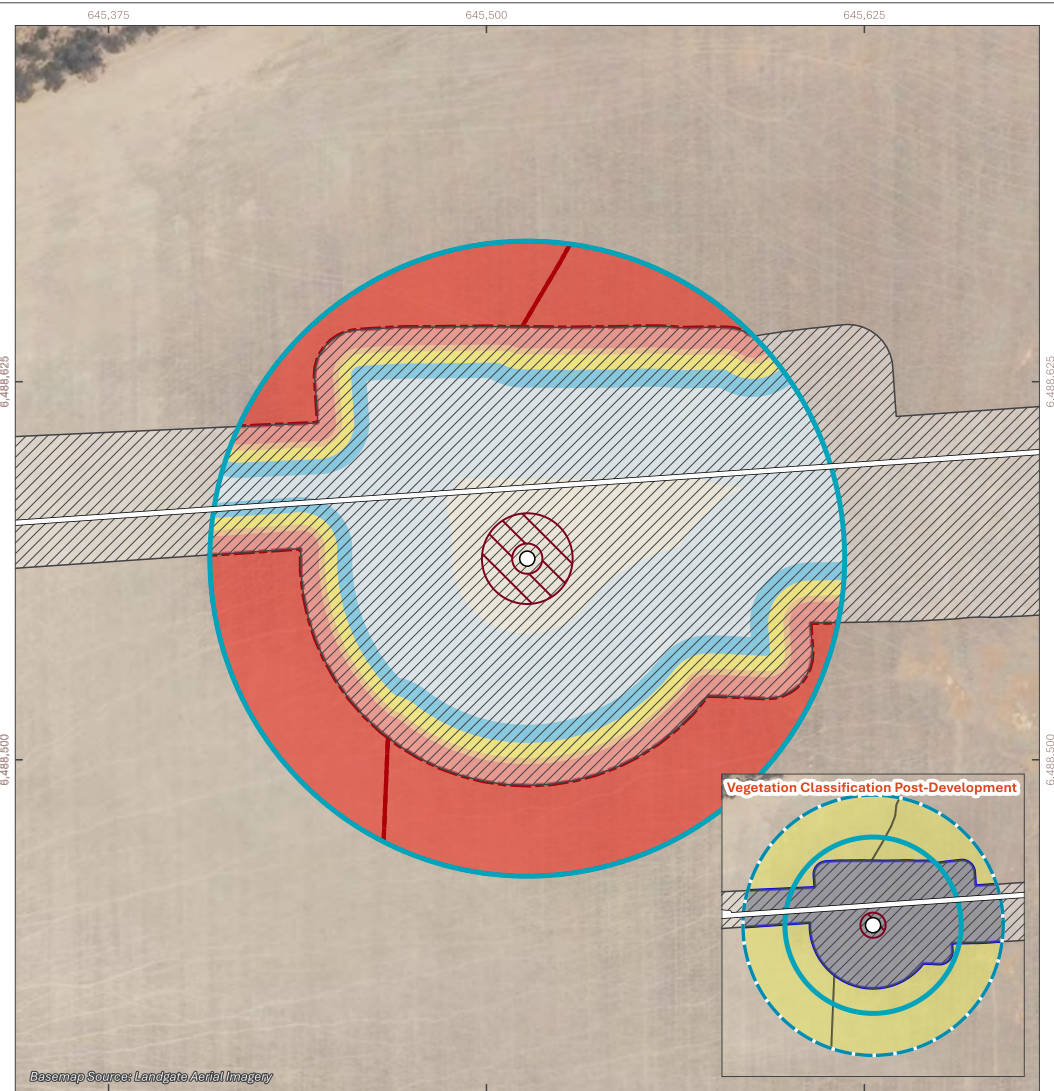
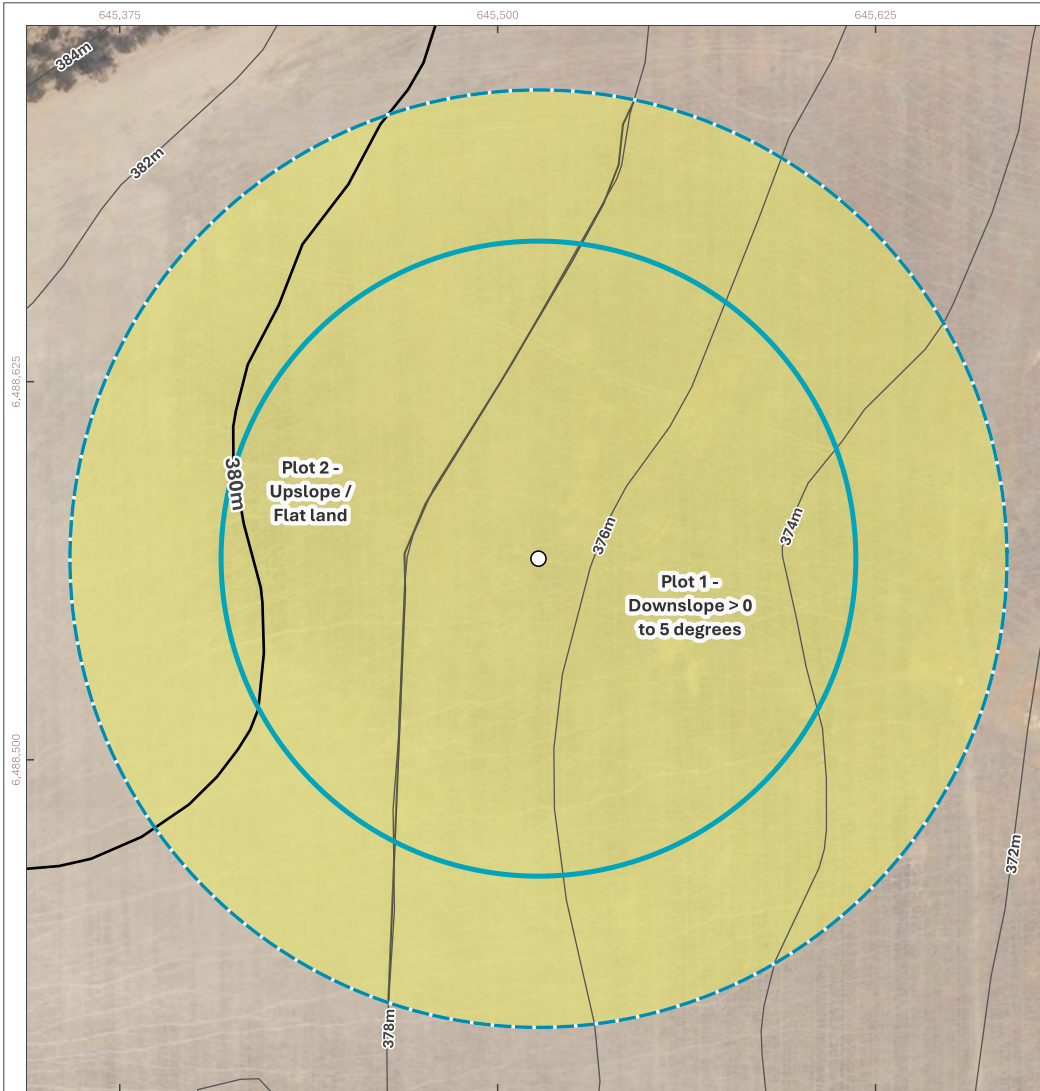
Figure 56: Bushfire Assessment - T46

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class B - Woodland
 - ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW



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Figure 57: Bushfire Assessment - T47

- Wind Turbine
- ▭ Buffer 100m
- ▭ Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- ▭ Class G - Grassland
 - ▭ Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- ▭ BAL-FZ
 - ▭ BAL-40
 - ▭ BAL-29
 - ▭ BAL-19
 - ▭ BAL-12.5
 - ▭ BAL-LOW

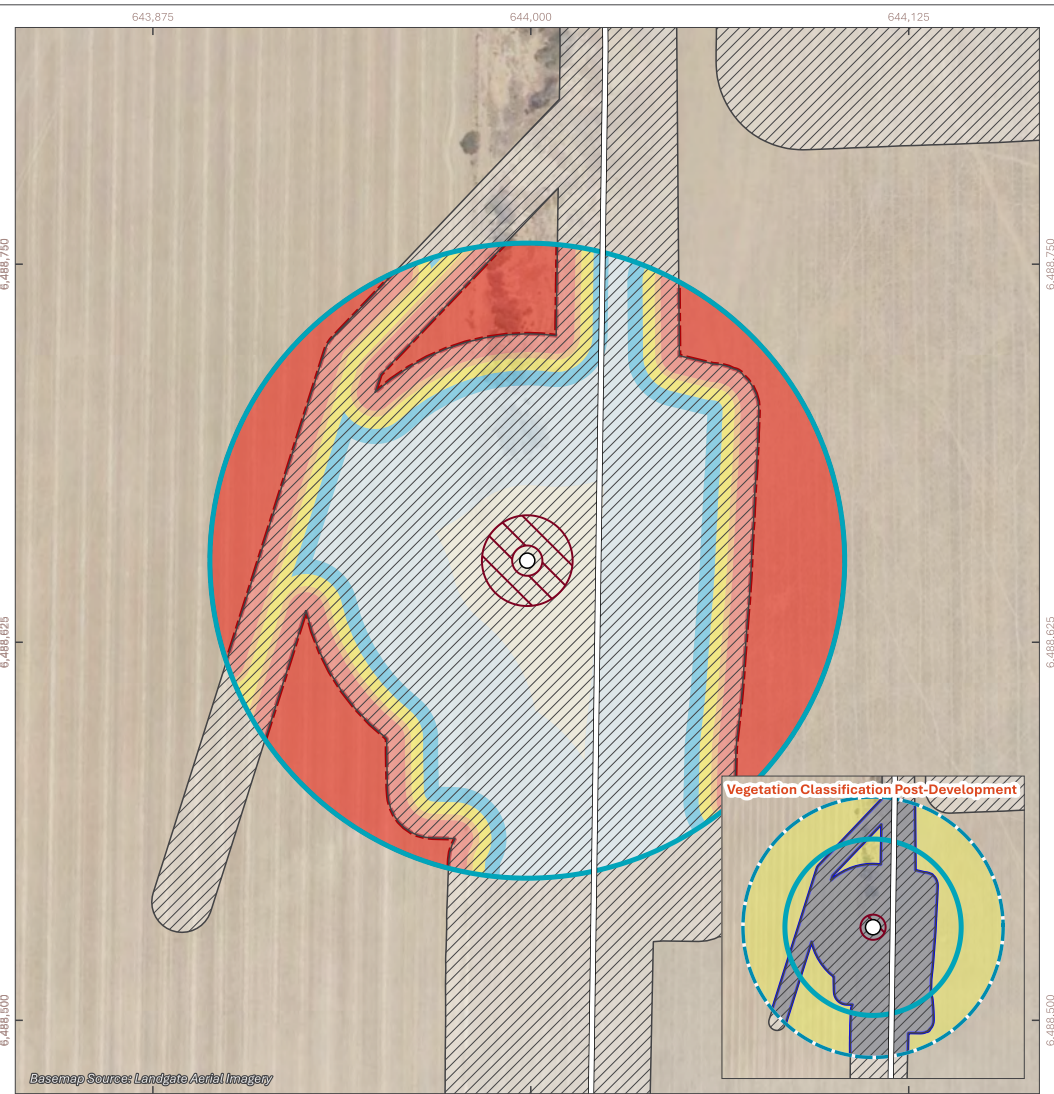
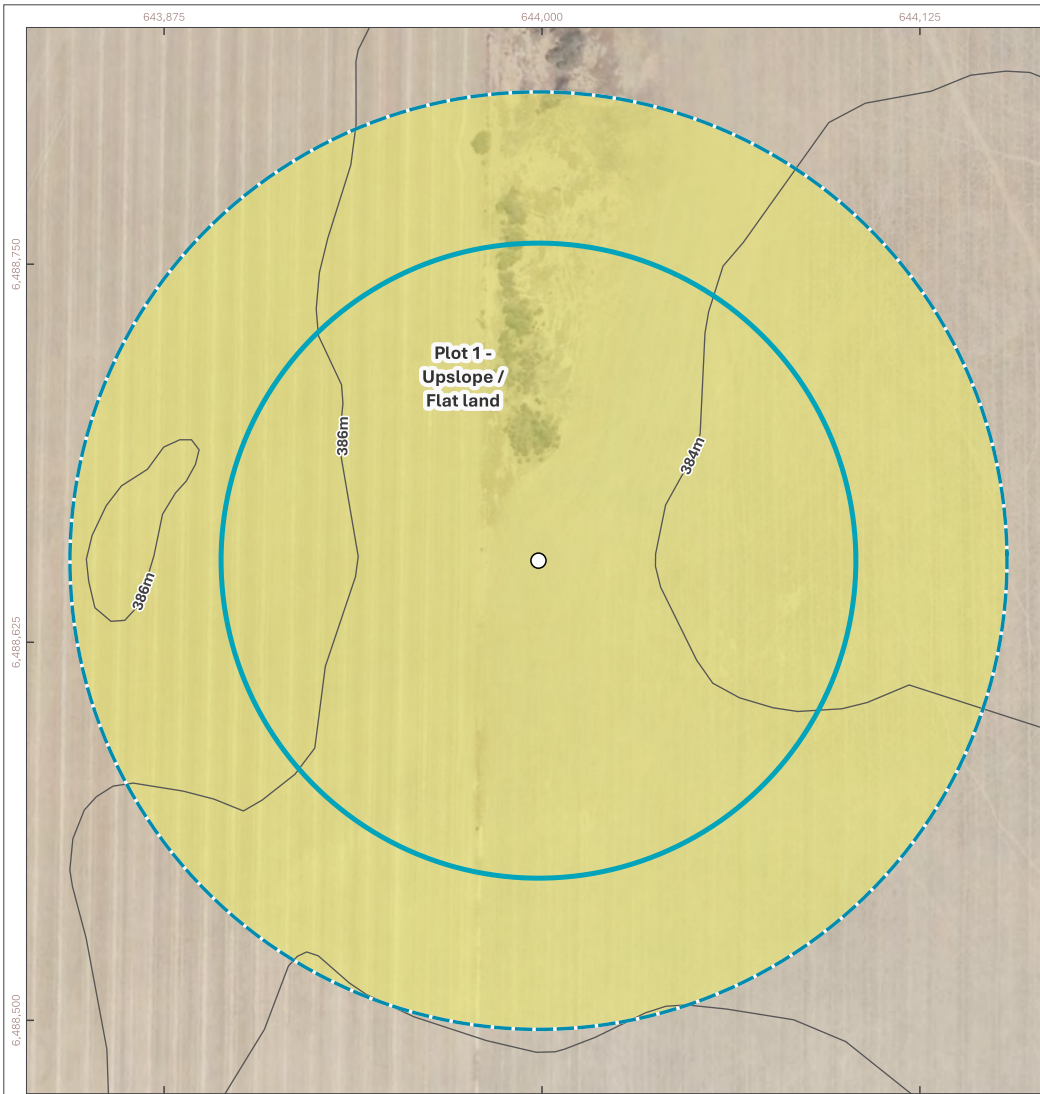


Figure 58: Bushfire Assessment - T48

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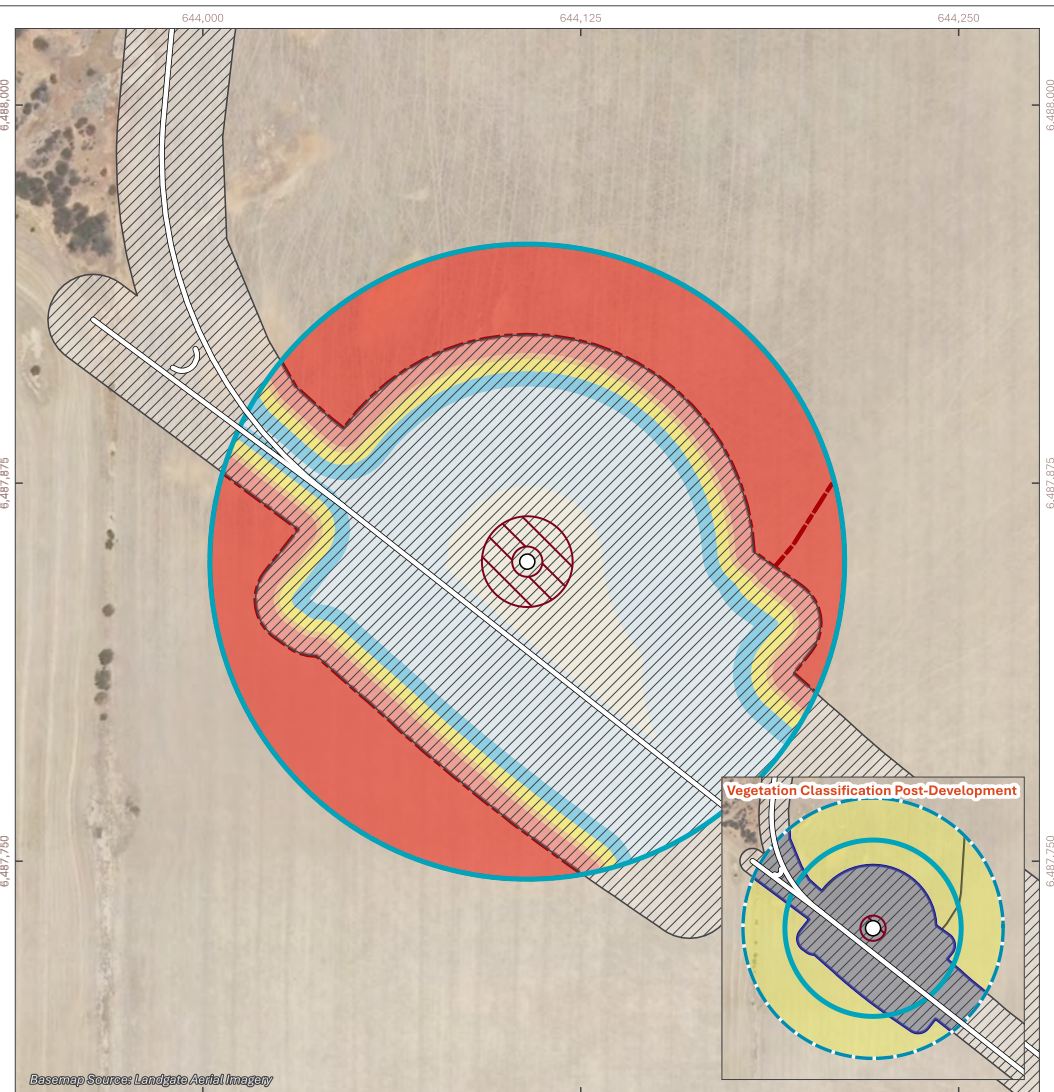


- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



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COORDINATE REFERENCE SYSTEM:
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SCALE: 1:2,500 PROJECT NUMBER: A25.368

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Figure 59: Bushfire Assessment - T49

- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



Figure 60: Bushfire Assessment - T50

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0 20 40 60 80 m

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- Wind Turbine
- Buffer 100m
- Buffer 150m

- Contours (DPIRD-072)**
- 2m
 - 10m
 - Access Road
 - ▨ Indicative Footprint
 - ▨ Asset Protection Zone (APZ)

- Vegetation Classification**
- Class D - Scrub
 - Class G - Grassland
 - Excluded AS 3959: 2018 2.2.3.2 (e)

- Bushfire Attack Level (BAL)**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW

