

# Bushfire Management Plan Lancelin South Structure Plan Amendment



Prepared for:

**VIMG**

31 March 2026

**Prepared by:**



Surefire Environmental Pty Ltd

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## Surefire Environmental Pty Ltd

### Lancelin South Bushfire Management Plan

#### Distribution List

Client	Contact name	Date
VIMG Pty Ltd	Cameron Lee	31 March 2026

#### Version

Version	Prepared and Authorised by	Accreditation	Date
Version 1	Sue Brand	Level 2 BPAD 36638	31 March 2026

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# 1. Background Information

VIMG Pty Ltd (VIMG) commissioned Surefire Environmental Pty Ltd (Surefire Environmental) to prepare a Bushfire Management Plan (BMP) to progress an update to the Structure Plan (SP) for the Lancelin South development area (the Site), within the Shire of Gingin (Figure 1). The original Structure Plan (SP) and Outline Development Plan (ODP) was prepared in September 2013 (Taylor Burrell Barnett (TBB)) (2013) to progress the rezoning of the Site to 'Urban Development'.

## 1.1 Location

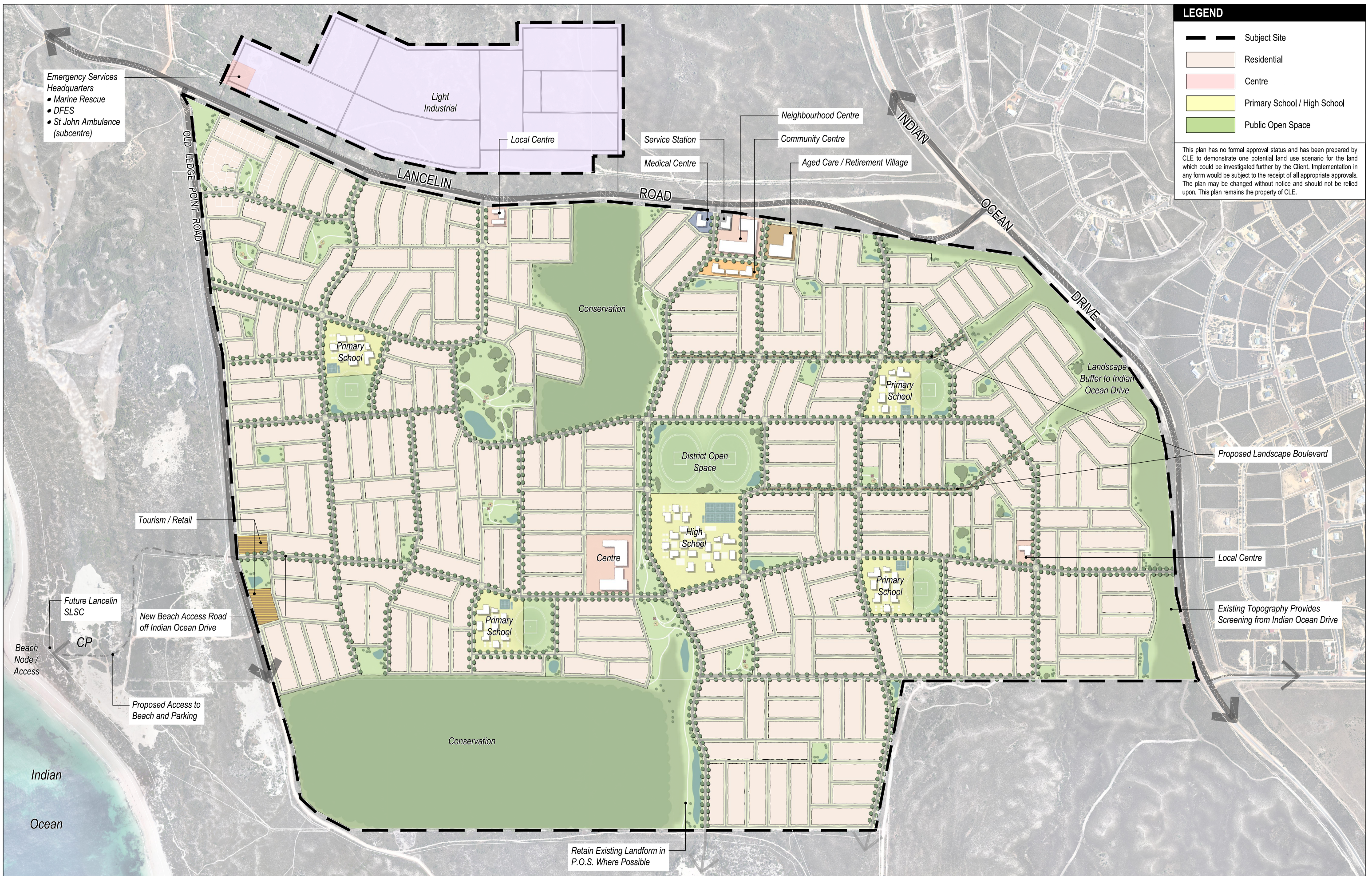
The Site is (Figure 1, Figure 2) is:

- approximately 4 km southeast of the Lancelin township
- is approximately 718 ha, with development planned north and south of Lancelin Road
- is surrounded by vegetation to the north, and south, Indian Ocean Drive to the east, and Old Ledge Point Rd to the west; note that the Lancelin Golf Club and lime sand operations are present to the west across Old Lancelin Road and rural residential Lots are present to the east across Indian Ocean Drive
- will create a range of land uses, including residential Lots, three primary schools, a high school, commercial and light industrial Lots, areas of public open space (POS), conservation areas, as well as roads and other associated infrastructure that will support the development of the Site.

## 1.2 Bushfire Prone Status

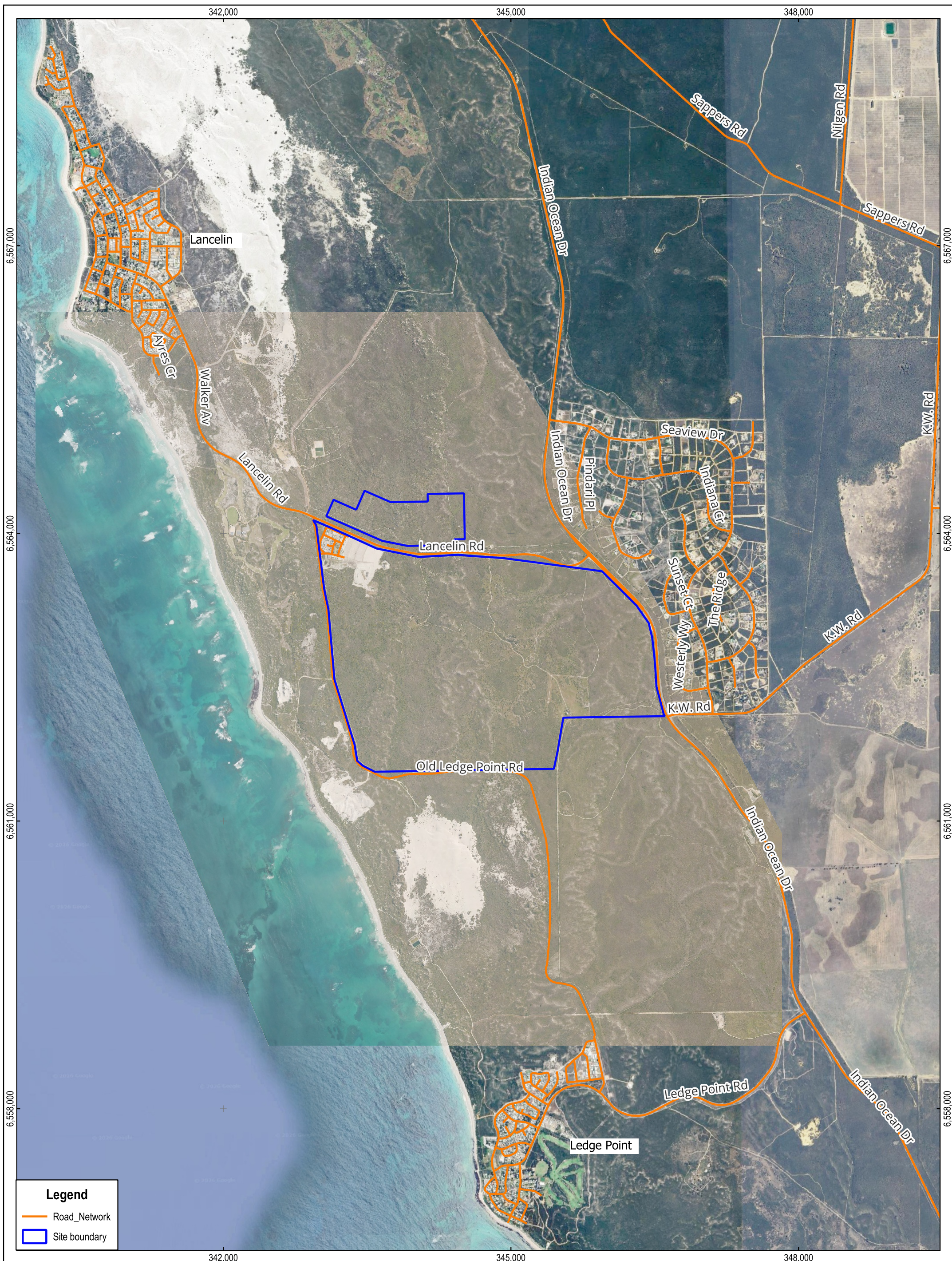
The Site is an Area 2 bushfire prone location as designated by the Fire and Emergency Services Commissioner, Office of Bushfire Risk Management (OBRM), within the Department of Fire and Emergency Services (DFES, 2025, Figure 3). Accordingly, there is a requirement for landowners to undertake an assessment to determine the risks and identify appropriate management strategies such that the development does not increase the inherent bushfire risk.

Portions of the site that are located within 100 m of vegetation designated as being bushfire prone necessitate the need for a bushfire attack level assessment (BAL-assessment) and where possible, assigning a BAL-rating, that will determine appropriate construction standards as per *AS 3959:2018 Construction of Buildings in Bushfire Prone Areas (AS 3959:2018)*. The BAL-assessment component of this document considers current and projected site conditions (i.e. vegetation classification pre- and post-development), along with the provisions of *State Planning Policy 3.7 Bushfire (SPP3.7)* (Department of Planning, Lands and Heritage (DPLH)), and the Western Australian Planning Commission (WAPC) (2024b) and *Planning for Bushfire Guidelines for the Implementation of State Planning Policy 3.7 Bushfire (the Guidelines)* (Department of Planning, Lands and Heritage and the Western Australian Planning Commission, 2024a). Note that as a detailed Lot design is not available, BAL-contours only are provided, with further detailed assessment to occur at later project phases.



This plan has no formal approval status and has been prepared by CLE to demonstrate one potential land use scenario for the land which could be investigated further by the Client. Implementation in any form would be subject to the receipt of all appropriate approvals. The plan may be changed without notice and should not be relied upon. This plan remains the property of CLE.





**Legend**

- Road\_Network
- Site boundary

**Figure 2**

**Location**

Structure Plan Amendment  
Lancelin South  
VIMG Pty Ltd

Scale: 1: 35,000

Original Size: A3

Aerial Imagery: Landgate, October 2024; Google Satellite, undated

Grid: GDA94 / MGA zone 50 (EPSG:28350)

0 750 1,500 m



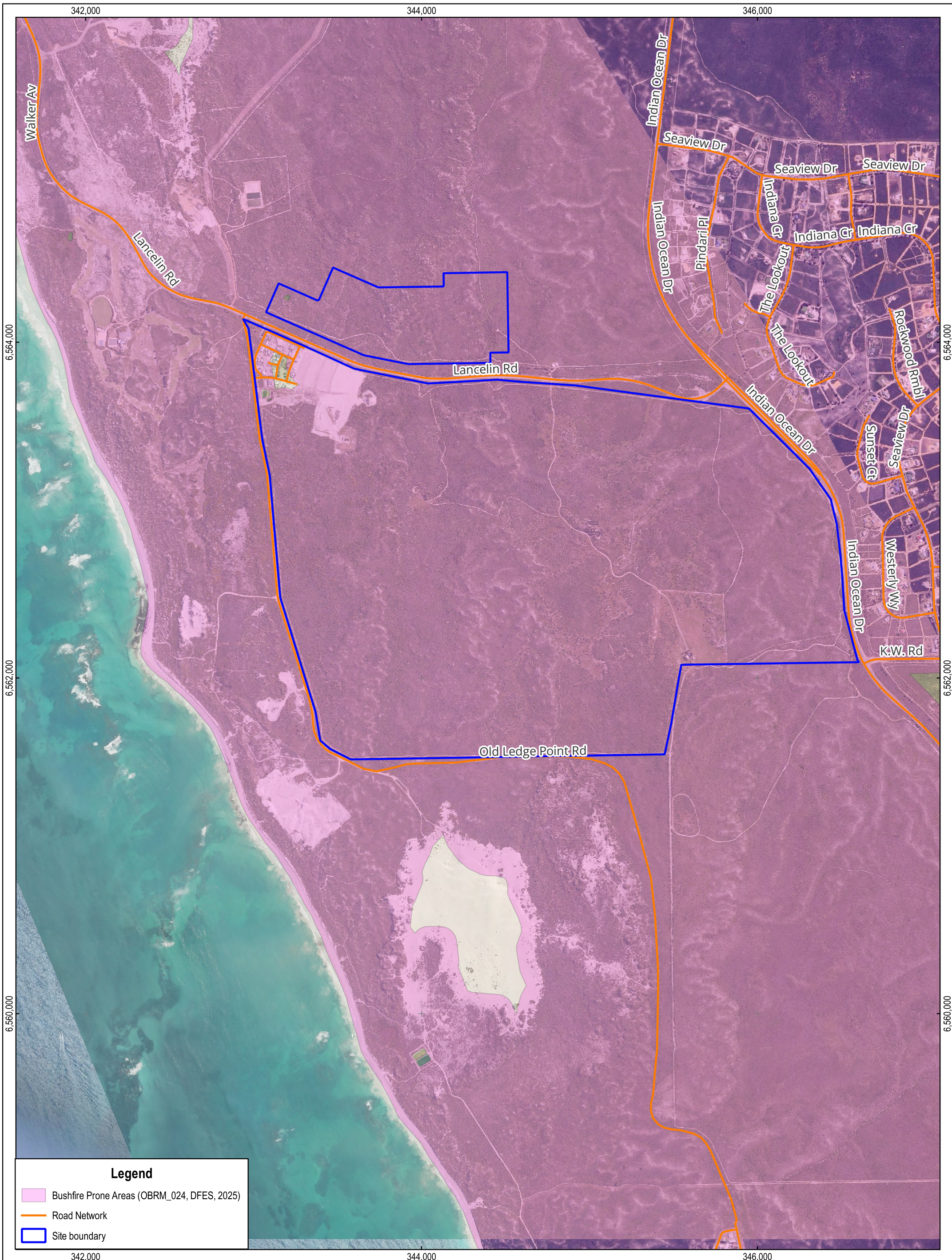


Figure 3

Bushfire Prone Status

Structure Plan Amendment  
Lancelin South  
VIMG Pty Ltd

Scale: 1: 20,000  
Original Size: A3  
Aerial Imagery: Landgate, October 2024; Google Satellite, undated  
Grid: GDA94 / MGA zone 50 (EPSG:28350)

0 750 1,500 m

### 1.3 Aims and Objectives

The aim of this BMP is to outline the bushfire management methods and requirements that will be implemented within the proposed subdivision. Accordingly, broad aims include:

- confirm that bushfire hazards can be effectively managed as the development proceeds
- minimise the impact of bushfire to the life and property of future residents
- allow easy access for firefighters if a bushfire does occur
- protect the landscape within the Site as far as is possible
- document bushfire prevention requirements of the area to which it relates.

The objectives of this Bushfire Management Plan are to:

- define land use areas and values within and in proximity to the Site
- define and assess the bushfire hazard according to the various vegetation classifications present
- outline the roles and responsibilities of individuals and organisations in relation to bushfire management as it relates to the Site
- document bushfire management strategies for the subdivision, taking into consideration:
  - vegetation to be retained within the broader Lancelin South development in the longer term (Figure 1, Figure 2)
  - the need for building construction standards where vegetated patches interface with the urban development
  - document the performance criteria and acceptable solutions adopted for the Site.

### 1.4 Document Preparation

Sue Brand (Surefire Environmental), an accredited Level 2 Bushfire Planning and Design (BPAD) practitioner with the Fire Protection Association Australia, has prepared this document. Activities involved with its preparation included:

- assessing the vegetation type and class present within and adjacent to the proposed development site using descriptions provided in *AS 3959:2018*
- assigning the bushfire hazard based on the vegetation classes present around the Site
- determining indicative BAL-ratings for each development cell located within 100 m of any classified vegetation based on currently available information
- suggesting management strategies that will be implemented based on current and projected site considerations.

Signed:



Date: 31 March 2026

Accreditation Number: BPAD36638

Accreditation Expiry Date: 30 April 2026



## 2. Environmental Considerations

Environmental considerations within Lancelin South were assessed by Ecoscape (Australia) Pty Ltd (2007) in to support preparation of the original 2007 Lancelin South Structure Plan and the later 2013 Structure Plan (SP) and Outline Development Plan (ODP) (Taylor, Burrell, Barnett, 2013). The Site is primarily vegetated with coastal heath species, with locations of conservation flora and fauna noted within the broader Lancelin South location.

### 2.1 Regional Context

Lancelin is located within the Swan Coastal Plain region of the Interim Biogeographical Regionalisation of Australia (IBRA). The Swan Coastal Plain comprises two major divisions, namely the Swan Coastal Plain 1 – Dandaragan Plateau and Swan Coastal Plain 2 – Perth Coastal Plain. The Site is in the Perth Coastal Plain subregion, which is broadly characterised as including areas of Jarrah and Banksia woodlands on sandy soils in a series of sand dunes, along with wetland areas, often within the interdunal swales (Mitchell, Williams, and Desmond, 2002).

### 2.2 Environmental Considerations

According to PGV Environmental (2026) within the Site boundaries there are:

- vegetation is dominated by typical coastal heath species including *Melaleuca systema*, *Acacia lasiocarpa*, *Calothamnus quadrifidus*, and *Scaevola thesioides*
- the presence of three Priority species, namely *Thryptomene* sp. Lancelin (Priority 2), *Stylidium maritimum* (Priority 3), and *Conostylis pauciflora* subsp. *euryrhipis* (Priority 4) (will be retained in the 70-ha conservation zone located in the southwestern portion of the Site adjacent to Old Ledge Point Rd)
- no declared rare flora were present and not considered likely to occur
- no threatened or priority listed ecological communities are present
- no declared rare fauna were noted within the Site boundary, with the Priority 3 Black-striped Snake (*Neelaps calonotos*) and the Priority 4 Graceful Sun Moth (*Synemon gratiosa*) recorded
- note that during the bushfire assessment site visit by Surefire Environmental, *Zanda latirostris* (Carnaby's Cockatoo) was observed foraging on roadside trees in the rural residential area across Indian Ocean Drive to the east, but not within the Site boundary
- the retention of conservation areas within the development area allow for the retention of typical coastal heath vegetation and dunal landforms typical of the area.
- no wetlands or waterways, with the closest wetlands being Karakin Lakes approximately 10 km to the east.

### 2.3 Native Vegetation – Modification and Clearing

Current land use within the Site is primarily coastal heath vegetation (Figure 4), with most to be cleared in a staged approach to accommodate the development. Where possible, the vegetation around stage(s) being developed will be cleared for an additional 100 m around the development boundary to facilitate the construction process as well as prevent temporary BAL-ratings on residential Lots.



**Figure 4: Current Land Use**

## **2.4 Revegetation and Landscaping**

No revegetation will occur within the Site boundary. The following reserves will be created during the development process (Figure 1):

- more than 20 public open space areas will be created across the Site that will be landscaped to support community recreational needs and serve a drainage function
- two conservation areas will be created that retain native vegetation, one in the north adjacent to Stage 10, and one in the southwestern portion of the Site
- a visual landscape buffer that protects the current landform will remain along the interface between the Site and Indian Ocean Drive.

At present, the level of landscaping and any tree retention has not been finalised and will be reviewed for bushfire implications when they do become available.

## 3. Bushfire Assessment Results

This section outlines the outcomes of the bushfire assessment process.

### 3.1 Broader Landscape Assessment

As the Site is located within an area designated as Area 2 on the Map of Bushfire Prone Areas (OBRM, 2024) (Figure 3), a broader landscape assessment (BLA) was required. Being a regional location with varying levels of vegetation within 2 km of the boundary, a full BLA was carried out using the methodology described in Appendix A Section A.1.4.2 in the *Planning for Bushfire Guidelines* (DPLH and WAPC, 2024a) to identify likely landscape scale destruction. This section provides outcomes of the BLA process.

The BLA assessment area included a 2 km zone surrounding the Lancelin South boundaries. Table 1 provides the justification for the BLA assessment process, and Table 3 the designation of the BLA area type based on the outcomes of the assessment process.

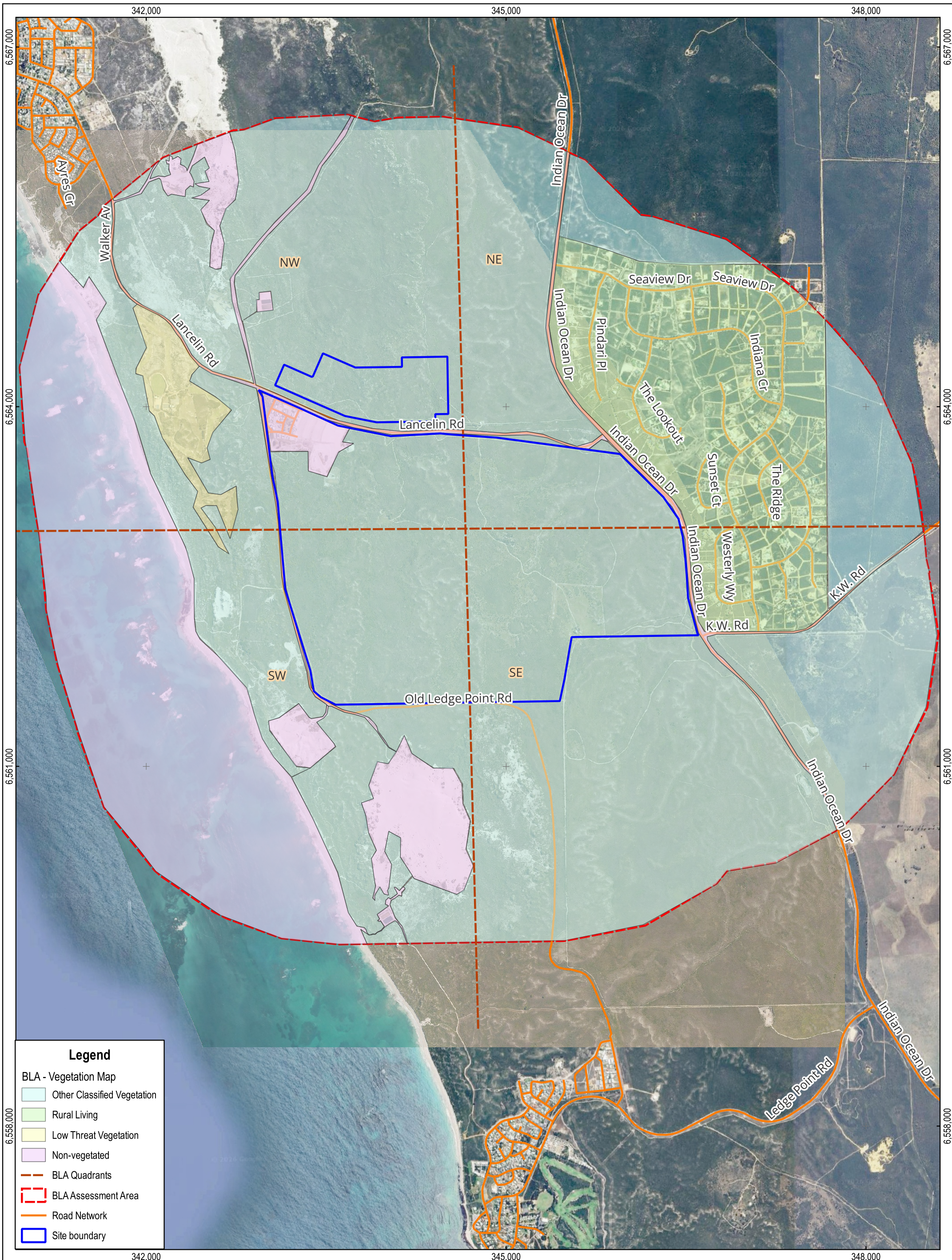
**Table 1: BLA Assessment and Justifications**

Step	Activity	Outcome
1	Determine BLA area	BLA area is delineated as 2 km from the Site boundaries (Figure 5).
2	Assess and map the broader landscape	<p><b>A. Vegetation mapping</b></p> <p>The broad vegetation mapping for the BLA is shown on Figure 5. The vegetation is primarily coastal heath (other classified vegetation) with the golf course to the west low threat vegetation, and the rural residential property (rural living) to the east across Indian Ocean Drive a mosaic vegetation pattern.</p>
		<p><b>B. Assess and map aspects</b></p> <p>The assessment of aspects is used to quantify bushfire hazards that could present landscape scale destruction. Most of the coastal heath within the Site boundary will be cleared to accommodate the development, and where possible, a 100 m asset protection zone (APZ) will be cleared around various development stages within the Site to the extent possible to prevent temporary BAL-ratings and facilitate staging activities. Coastal heath will remain across Old Lancelin Road to the west, as well as within portions of the broader Lancelin South approved ODP area, and north and south of the development area (Figure 5, Figure 6).</p>
		<p><b>C. Assess and map the predominant vegetation pattern</b></p> <p>The predominant vegetation pattern is coastal heath within the approved ODP area, and which extends beyond its boundaries north across Lancelin Road, west across Old Lancelin Road, and south beyond the ODP boundary (Figure 5, Figure 6).</p>
		<p><b>D. Assess and map road pattern and suitable destinations</b></p> <p>Lancelin South is being developed from north of Lancelin Road towards the south (Figure 5). The development road network will create roads that provide access to Lancelin Road to the north, and to Old Lancelin Road to the west, both of which provide access to the town of Lancelin or to Indian Ocean Drive. As development to the east and south progresses, additional access/egress options will become available (Figure 6).</p>

Step	Activity	Outcome
3	Establish the broader landscape type	Determined using points scoring system indicated in Table 3 of Appendix A of the <i>Guidelines</i> . The Site is a Broader Landscape Type A; see Table 2 for the rationale for this assessment.

**Table 2: Determination of the Broader Landscape Type**

Criteria	Justification	Points
Proximity of the planning proposal to a suitable destination is:	1 – 10 km – Lancelin is approximately 4 km from the Site, with development within Lancelin South Stages 1 – 6 progressing to and subdivision applications submitted for Stages 7 – 8, and 9 – 10 to the south and east of Stages 1 – 6. Currently developed areas with the broader Lancelin South development, a rural residential area across Indian Ocean Drive to the east, as is the coastal foreshore and golf course across Old Ledge Point Rd to the west are all < 1 km away. Ledge Point is approximately 4 km to the south.	1
The road pattern from the planning proposal to a suitable destination is:	The planned road network for the urban development area and the light industrial area north of Lancelin Rd is/will be simple and direct, as is the road to the Lancelin Town Centre.	1
The predominant vegetation pattern is:	The predominant vegetation pattern is extensive coastal heath that will largely be cleared to accommodate the development.	5
Exposure of the planning proposal to an identified external bushfire hazard (excluding Class G Grassland) is:	The coastal heath within the Site will mostly be cleared to accommodate the development. Where possible, that which occurs for 100 m around the development area within the Developer's land will also be cleared. The interface of the built environment with vegetation will be to the west, north, and south, with some exposure to the east.	4
<b>Total Points</b>		<b>11</b>
<b>Assessed Broader Landscape Type</b>		<b>A</b>



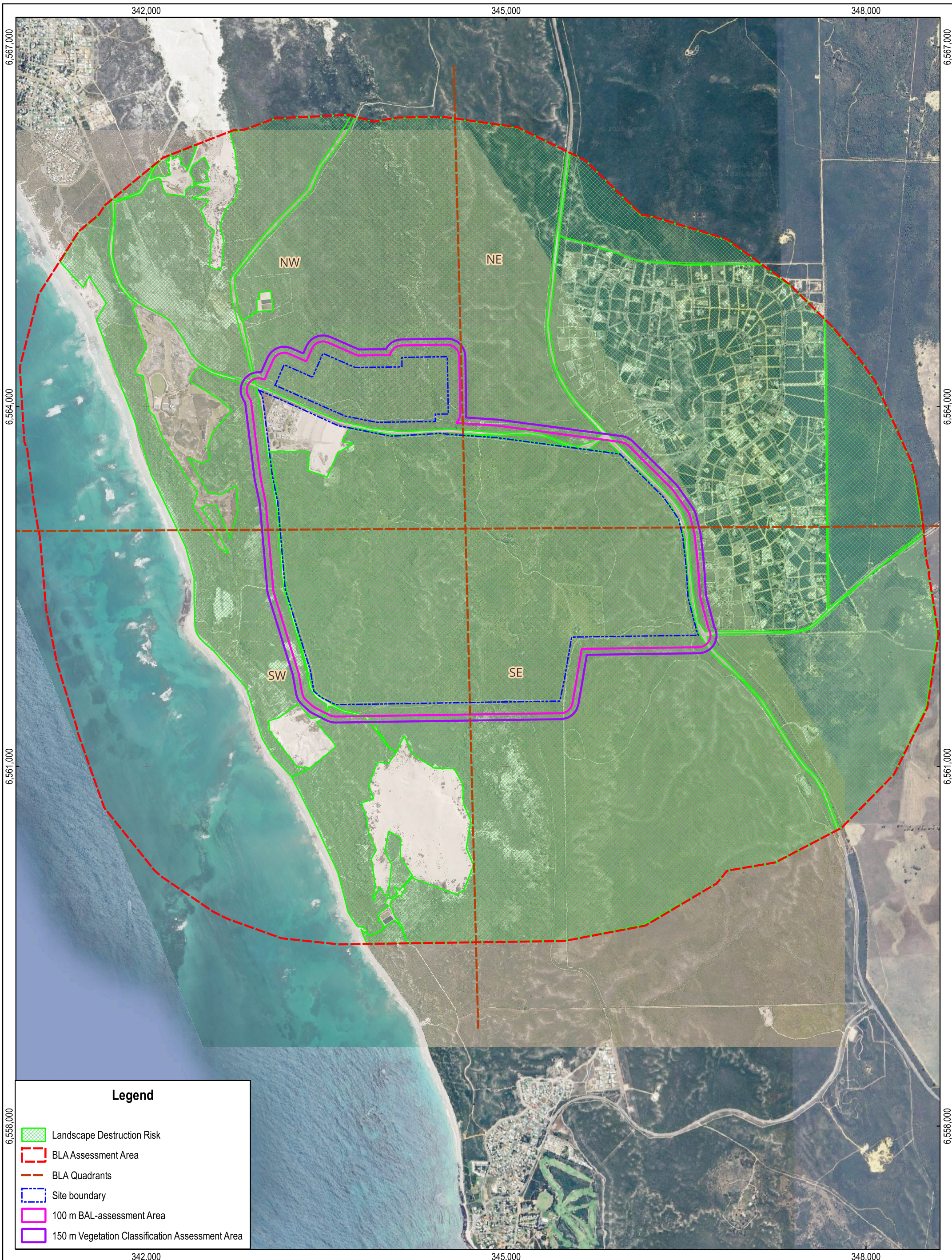
**Figure 5**  
**Broader Landscape Assessment (BLA)**  
**Vegetation Mapping**

Structure Plan Amendment  
 Lancelin South  
 VIMG Pty Ltd

Scale: 1: 28,000  
 Original Size: A3  
 Aerial Imagery: Landgate, October 2024; Google Satellite, undated  
 Grid: GDA94 / MGA zone 50 (EPSG:28350)

0 750 1,500 m





**Legend**

- Landscape Destruction Risk
- BLA Assessment Area
- BLA Quadrants
- Site boundary
- 100 m BAL-assessment Area
- 150 m Vegetation Classification Assessment Area

**Figure 6**

**Broader Landscape Assessment (BLA)  
Landscape Destruction Risk**

Structure Plan Amendment  
Lancelin South  
VIMG Pty Ltd

Scale: 1: 28,000

Original Size: A3

Aerial Imagery: Landgate, October 2024; Google Satellite, undated

Grid: GDA94 / MGA zone 50 (EPSG:28350)

0 750 1,500 m



## 3.2 Contours and Slope

The topography across the Site is undulating terrain associated with coastal dunes (Figure 7). There is a general rise in the Site from west (4 m Australian Height Datum (AHD)) to east (up to 64 m AHD). Topography within the Site is variable with a series of dune ridges and swales, with lowest height being 1 m AHD in the eastern dune swale, and up to 64 m along the highest dune ridge adjacent to Indian Ocean Drive (Figure 7). When considering the vegetation that will be retained in perpetuity, a review of the slope under the vegetation indicates that the slope will primarily be Upslope or Flat, with one area where it will be Downslope 0 – 5° (Figure 7); these are the slopes that have been applied to the BAL-modelling (Section 3.6).

Modification of the dunes will occur when clearing and civil engineering activities involving cut and fill are carried out to create a stable surface for development activities. Note that where possible, clearing will occur for up to 100 m beyond Stage boundaries being progressed to facilitate further staging activities and minimise temporary BAL-ratings. As clearing and development continues over time, the outcome will mean that the only classified vegetation that will be present within 100 m of the Site is that which will be retained on an ongoing basis, including that within conservation areas and vegetation to be retained on an ongoing basis beyond the Lancelin South boundary.

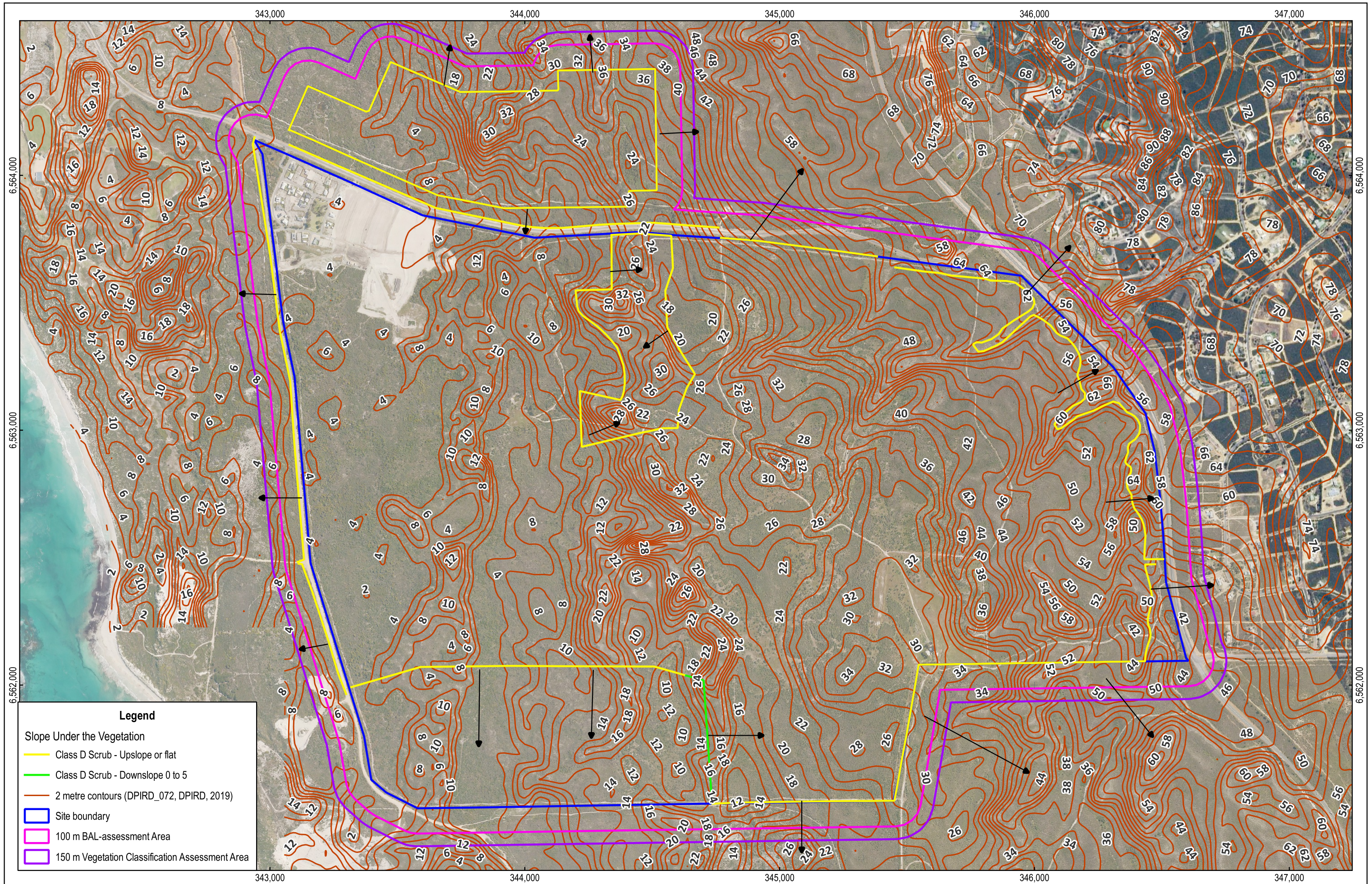
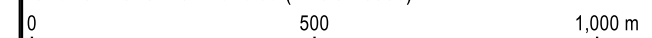


Figure 7

Contours and Slope Under the Vegetation

Structure Plan Amendment  
Lancelin South  
VIMG Pty Ltd

Scale: 1: 13,374  
Original Size: A3  
Aerial Imagery: Landgate October 2024, Google Satellite, undated  
Grid: GDA94 / MGA zone 50 (EPSG:28350)



### 3.3 Vegetation Classification

The vegetation classification in addition to the slope of the potential source of the fire is key to determining the potential for exposure of a location to radiant heat, smoke, and embers, for example. The vegetation classification within 150 m of the Site was assessed during the site visit carried out on 16 and 17 May 2025 using descriptions provided in Table 2.3 and Figure 2.4 of AS 3959:2018. Note the following limitations with the vegetation classification assessment process:

- limited trafficable sandy access tracks
- the presence of limestone outcrops
- general vegetation density across the Site, including overgrown tracks
- the presence of other obstructions/debris on tracks and other areas
- private property
- fences and gates.

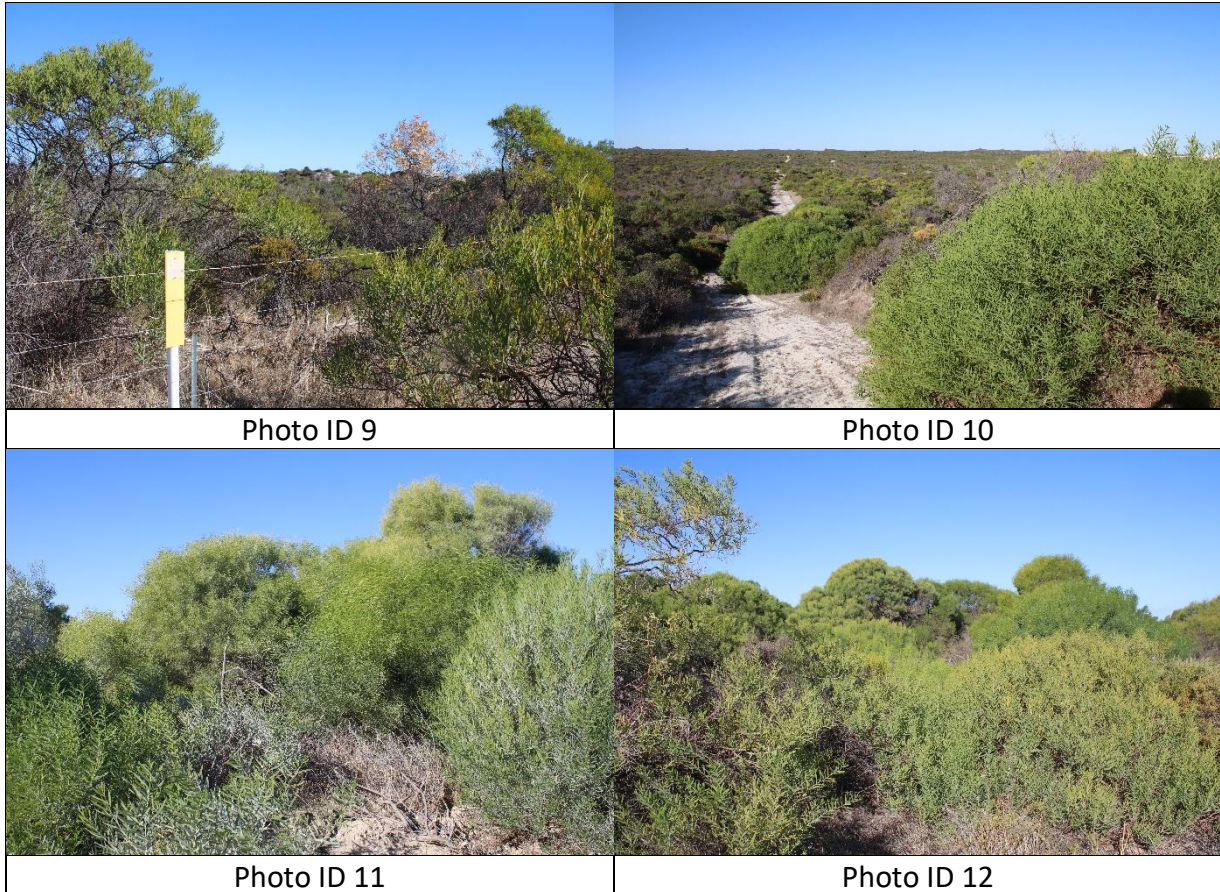
In the short term, one of the primary aims of the process is to confirm that the bushfire implications of the proposed development can be effectively managed. As the Structure Plan will not be the final phase of the planning process, there will be additional opportunities to review and confirm the Site slope and vegetation assessment, as well as other relevant aspects of the proposed development.

For the purposes of this document and development phase, each vegetation class is discussed and shown in Figure 8, Figure 9, Figure 10, and Figure 11. The pre-development vegetation classification, or current situation, for the Site is provided in Figure 12, with the expected post-development classification, or the vegetation that will remain a bushfire risk to the planned subdivision in the longer term, shown in Figure 13.

#### 3.3.1 Patch 1: Class D Scrub

Class D Scrub is characterised by shrubs to 4 m with a continuous canopy from ground level, noting that trees to 6 m (e.g.: Acacia and Melaleuca) can be present. This vegetation classification is present across most of the development area and extends for 150 beyond the Site boundary to the north, east and south (Figure 8). Note that while small patches of Class C Shrubland and Class G Grassland are present within the Site, the dominant vegetation class is the Class D Scrub. This vegetation class will mostly be cleared to accommodate the development, with some to be retained in the planned conservation areas and the landscape protection area. The patch across Old Ledge Point Road to the west, areas beyond the southern Site boundary, that which is present around the light industrial area across Lancelin Rd to the north, as well as that which will be kept in the conservation areas will be retained and represent an ongoing bushfire risk.

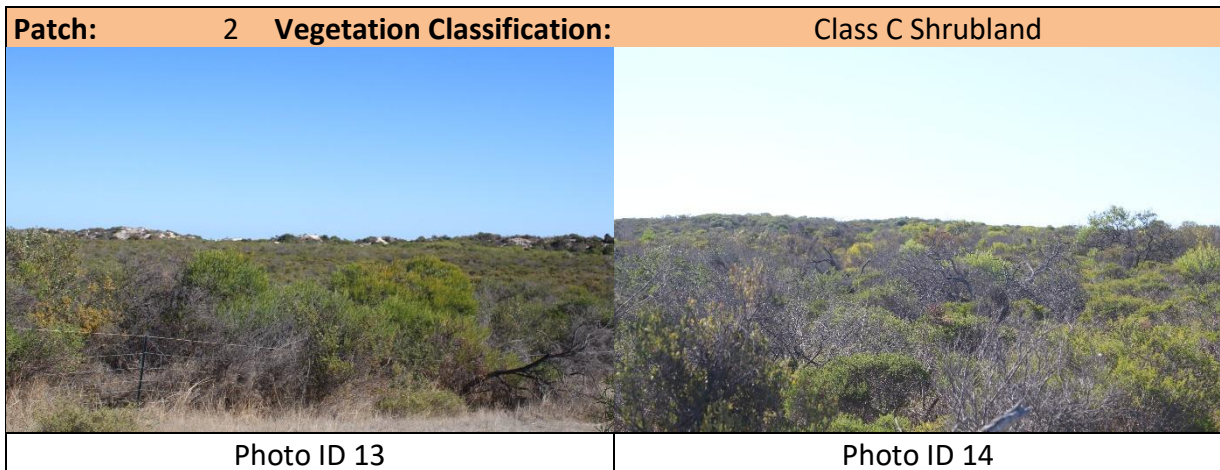
Patch: 1 Classification: Class D Scrub	
	
Photo ID 1	Photo ID 2
	
Photo ID 3	Photo ID 4
	
Photo ID 5	Photo ID 6
	
Photo ID 7	Photo ID 8



**Figure 8: Class D Scrub**

### 3.3.2 Patch 2: Class C Shrubland

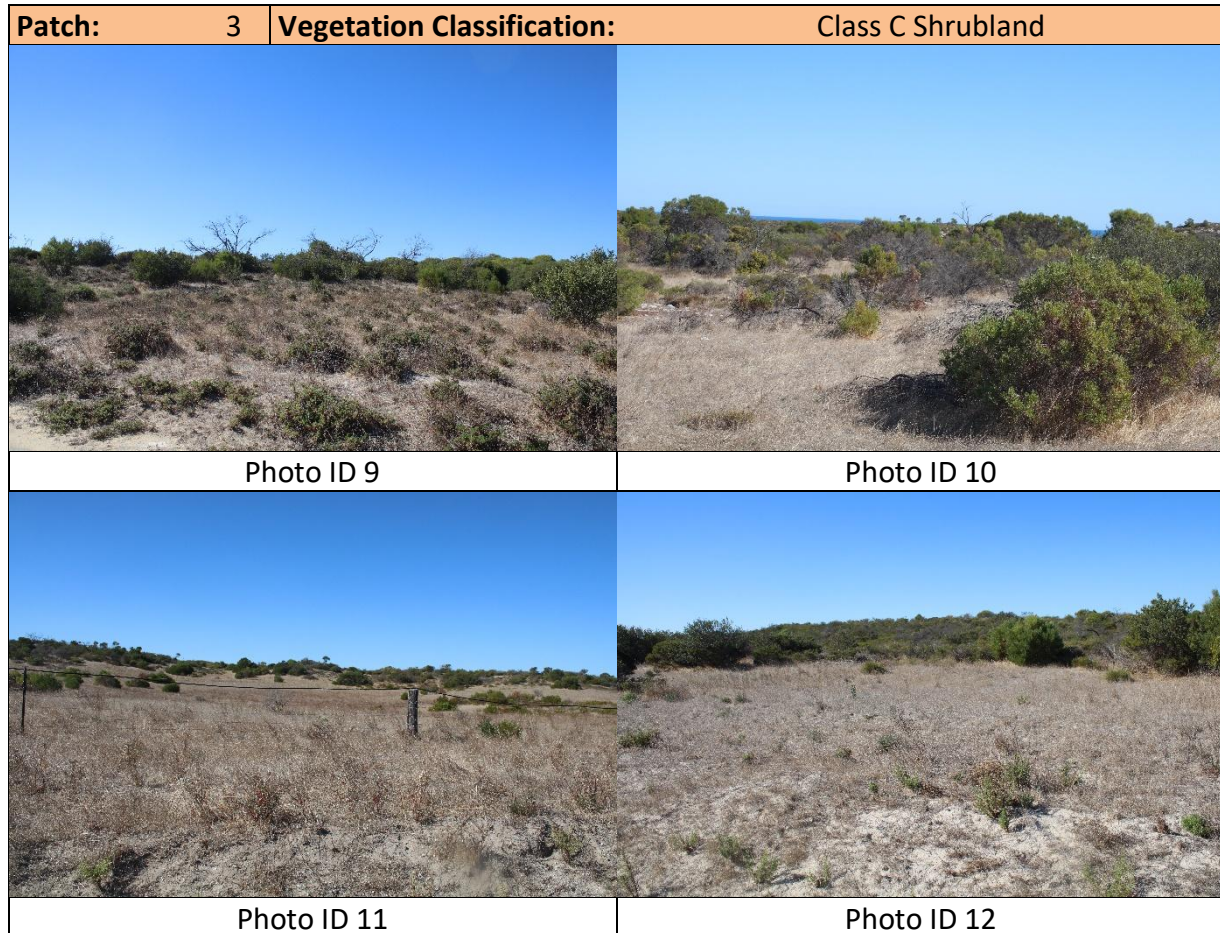
Class C Shrubland is characterised by shrubs to 2 m with a continuous canopy from ground level, with the occasional taller tree or shrub present. This vegetation class is present in small patches within the Site, with two larger patches apparent in the southwestern portion of the Site and across Old Ledge Point Road (Figure 9). The patch within the Site will be cleared to accommodate the development, and as the second patch is more than 70 m to west, it will not influence BAL-ratings as the patch of Class D Scrub in this area is closer to the Site boundary.



**Figure 9: Class C Shrubland**

### 3.3.3 Patch 3: Class G Grassland

Class G Grassland includes all forms except for tussock moorlands and may include the presence of the occasional tree and shrub if the overstorey canopy cover is less than 10%. Patches of Grassland area associated with areas of disturbance within the Site, including adjacent to tracks, previously cleared areas, and the property in the southern portion of the Site (Figure 10).



**Figure 10: Class G Grassland**




### 3.3.4 Patch 4: Low Threat Vegetation

Low Threat Vegetation is characterised by factors such as flammability, moisture content or fuel load. Examples include grassland managed in a minimal fuel condition, maintained lawns, golf courses, reserves, parklands, and sporting fields. At present, the only low threat vegetation present within the Site boundary are two of the public open space (POS) areas that have recently been created in Stages 1 – 3 in the northwestern portion of the Site, hence no photos are available (Figure 1). Additional low threat areas will be created as development across the Site progresses and landscaping occurs in those areas. Patches of landscaped vegetation (low threat vegetation) will also be created around the perimeter of the planned conservation areas and the landscape buffer that will be created along the eastern boundary near Indian Ocean Drive. Each will be reviewed for bushfire implications as the development of the various stages are progressed and clearance letters are prepared ahead of titles being issued after the Lots are created.

### 3.3.5 Patch 5: Non-Vegetated Areas

Non-vegetated areas are subject to exclusion clause 2.2.3.2 (e) of AS 3959:2018, with those within and close to the Site including (Figure 11):

- cleared areas associated with previous development phases to the northeast
- Old Ledge Point Road to the west, Lancelin Road to the north, and Indian Ocean Drive to the east
- internal sandy/limestone tracks
- current buildings and other infrastructure.

Patch:	5	Exclusion Clause:	Non-vegetated Areas, Clause 2.2.3.2 (e)
			
	Photo ID 19		Photo ID 20
			
	Photo ID 21		Photo ID 22
			
	Photo ID 23		Photo ID 24

**Figure 11: Non-vegetated Areas**

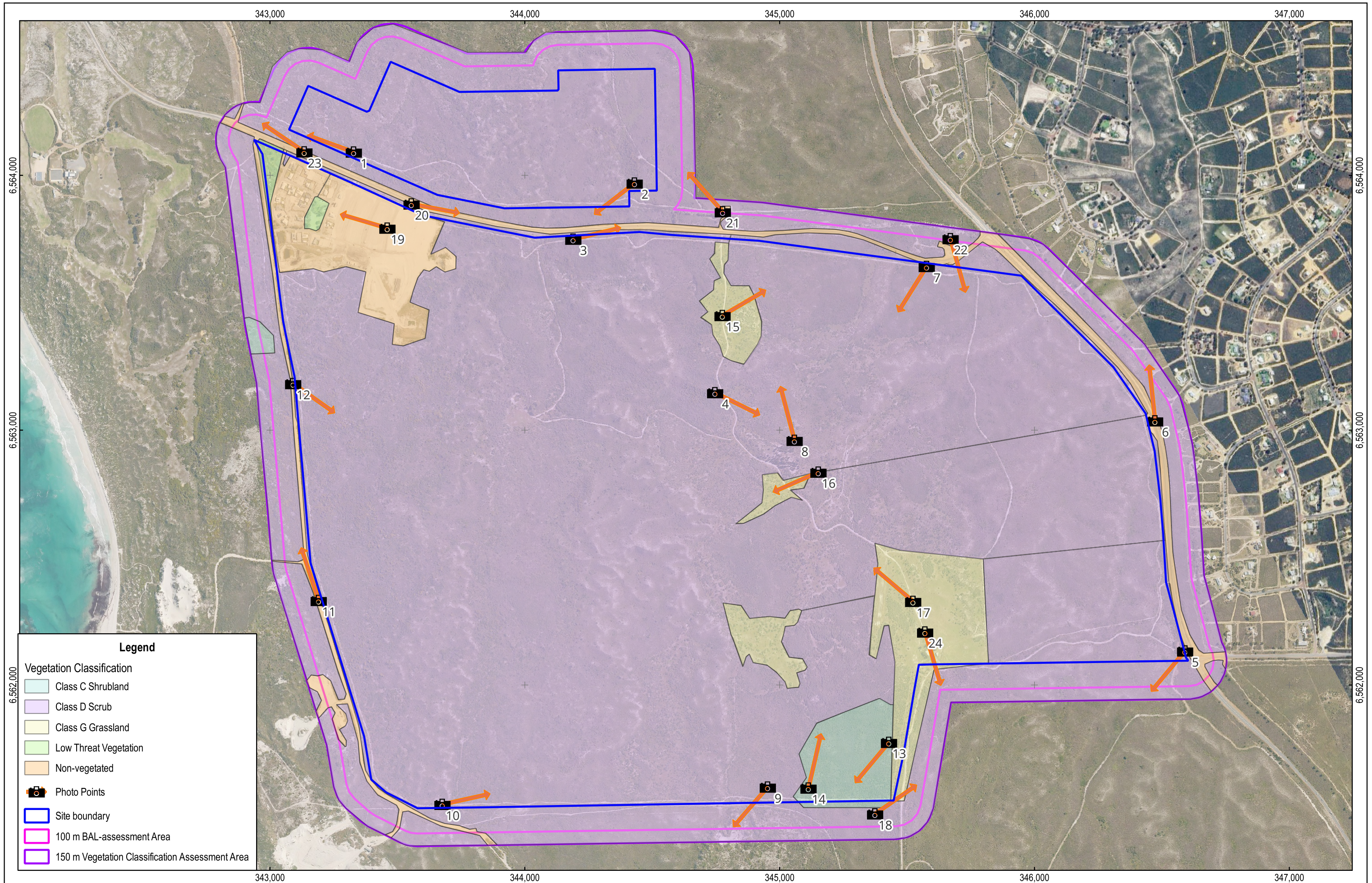
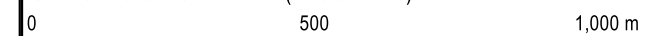


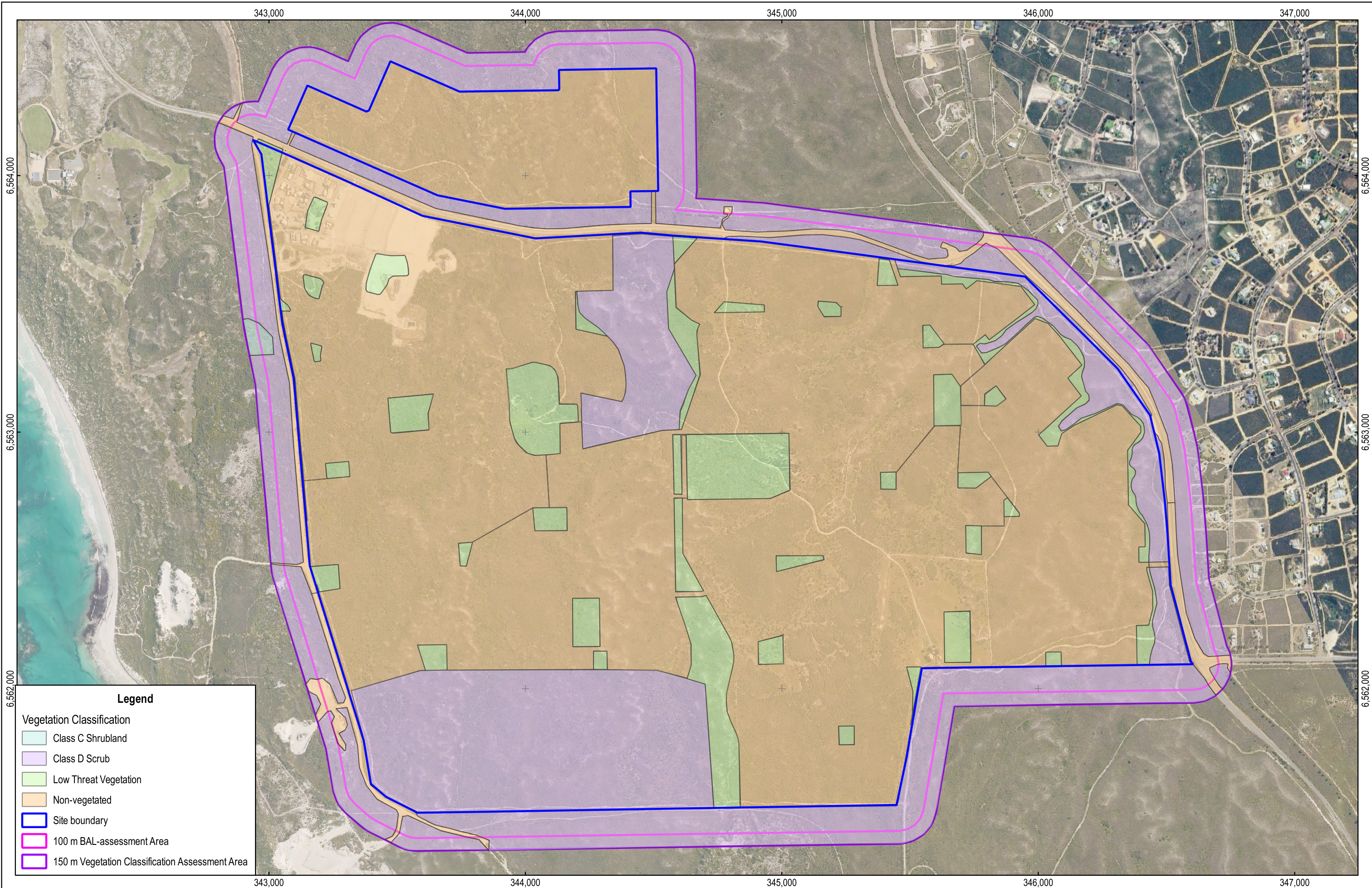
Figure 12

Pre-development Vegetation Classification

Structure Plan Amendment  
Lancelin South  
VIMG Pty Ltd

Scale: 1: 13,374  
Original Size: A3  
Aerial Imagery: Landgate October 2024, Google Satellite, undated  
Grid: GDA94 / MGA zone 50 (EPSG:28350)





**Legend**

Vegetation Classification

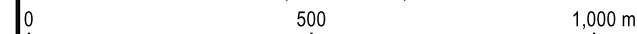
- Class C Shrubland
- Class D Scrub
- Low Threat Vegetation
- Non-vegetated
- Site boundary
- 100 m BAL-assessment Area
- 150 m Vegetation Classification Assessment Area

**Figure 13**

**Post-development Vegetation Classification**

Structure Plan Amendment  
Lancelin South  
VIMG Pty Ltd

Scale: 1: 13,374  
Original Size: A3  
Aerial Imagery: Landgate October 2024, Google Satellite, undated  
Grid: GDA94 / MGA zone 50 (EPSG:28350)



### 3.4 Fire Danger Index (FDI)

The Fire Danger Index for this site is FDI 80, as documented in Table 2.4.3 of *AS 3959:2018* and which is the nominated FDI for Western Australia.

### 3.5 Potential Bushfire Impacts

Potential bushfire impacts within the Site include smoke, ember attack, and radiant heat, with the BAL-analysis provided in Table 3.

**Table 3: BAL-analysis**

Patch	Vegetation Class	Slope	Separation Distance (m)	Maximum BAL-rating
1	Class D Scrub	Upslope or Flat	> 13	BAL-29
2	Class C Shrubland	Upslope or Flat	> 70	BAL-12.5
3	Class G Grassland	Will be cleared	N/A	BAL-Low
4	Low Threat Vegetation	N/A	N/A	BAL-Low
5	Non-vegetated areas	N/A	N/A	BAL-Low

### 3.6 BAL-Assessment

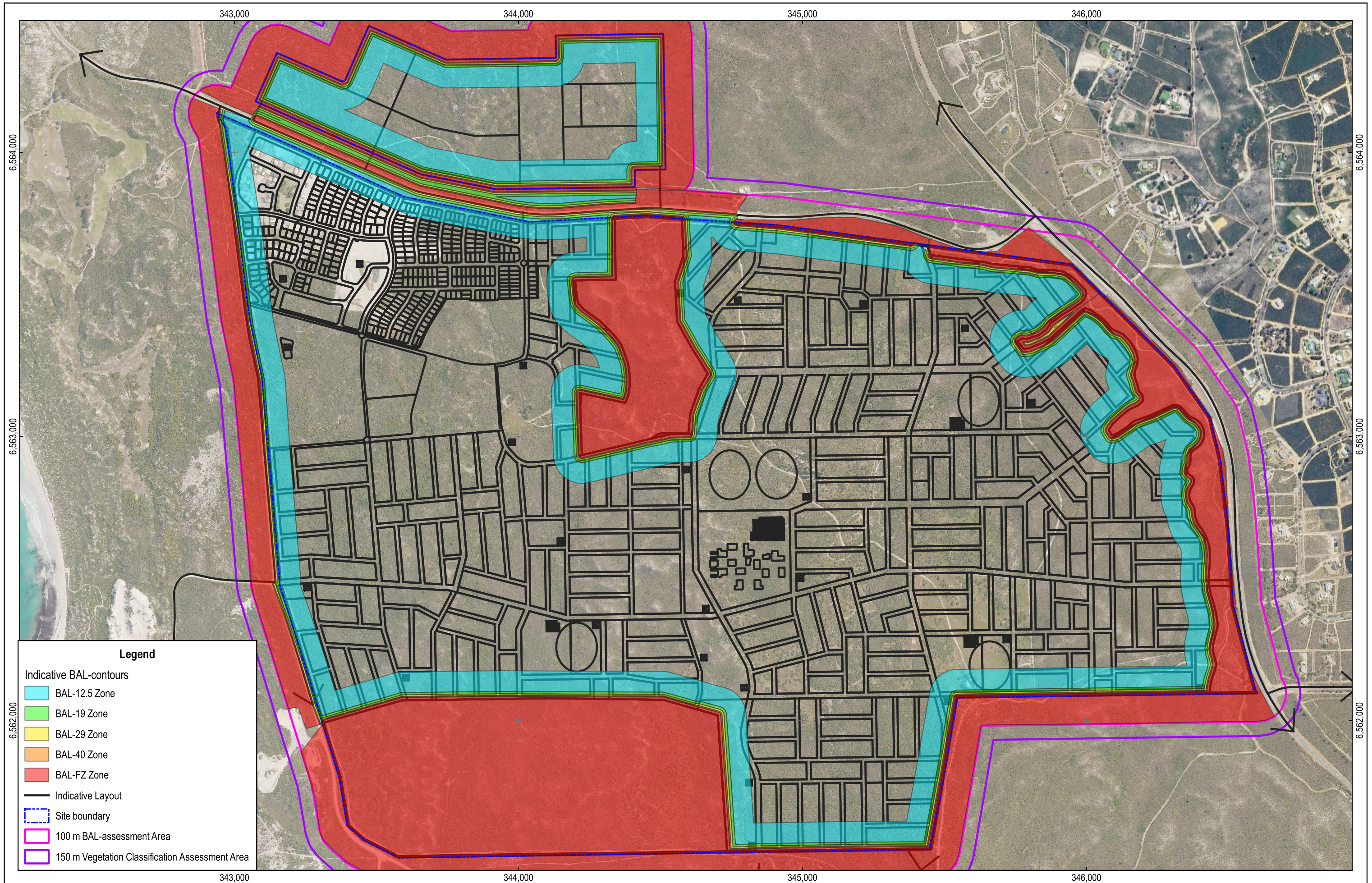
As a detailed Lot layout is not available, the BAL-contour diagram (Figure 14) provides an indication of BAL-ratings based on currently expected site conditions. The BAL-assessment process indicates that the maximum BAL-rating for Lots will be BAL-12.5, with no Lots located within a BAL-40 or BAL-FZ zone. Accordingly, this demonstrates that the bushfire implications associated with Lancelin South can be effectively managed. A review of BAL-contours and ratings will occur at relevant future planning phases such as during subdivision phases or when there has been a change to the design; at that time an updated BAL-contour diagram will be prepared.

### 3.7 Asset Protection Zone

The Asset Protection Zone (APZ) for the Site is the area that provides the separation distance between the edge of the classified vegetation and building walls, with the preferred width of the APZ being 100 m. For locations where a 100 m APZ width cannot be achieved, a reduced APZ can be implemented when a BAL-rating is determined for the building. The reduced APZ commences at the junction of the BAL-40 and BAL-29 zones, or the junction of the orange and yellow zones shown in Figure 14 and will extend to the building walls which is the point where the potential radiant heat impact of a bushfire does not exceed 29 kW/m<sup>2</sup>. As no Lot has a BAL-rating higher than BAL-29, a suitable APZ for the Site can be demonstrated.

### 3.8 Shielding

Clause 3.5 of *AS 3959:2018* allows for a reduction in the nominated construction standard for a building in a bushfire prone area where the elevation is not exposed to the source of the bushfire attack, noting that the reduction in building standard cannot reduce below BAL-12.5. As some Lots will be rated BAL-29 and BAL-19, the shielding provisions may apply.



**Legend**

Indicative BAL-contours

- BAL-12.5 Zone
- BAL-19 Zone
- BAL-29 Zone
- BAL-40 Zone
- BAL-FZ Zone
- Indicative Layout
- Site boundary
- 100 m BAL-assessment Area
- 150 m Vegetation Classification Assessment Area

**Figure 14**

**Indicative BAL-contours**

Structure Plan Amendment  
Lancelin South  
VIMG Pty Ltd

Scale: 1: 12,000  
Original Size: A3  
Aerial Imagery: Landgate October 2024, Google Satellite, undated  
Grid: GDA94 / MGA zone 50 (EPSG:28350)



## 4. Bushfire Hazard Issues

A review of the environmental considerations, current vegetation classification (Figure 12) and the expected post-development vegetation classification (Figure 13) indicated that there are no impediments to development of the Lancelin South development area. Additionally, as a concept plan has been prepared, it was possible to model the BAL-contours for the Site (Figure 14) based on the expected post-development vegetation classification and confirm that the Site is suitable for development and will comply with the bushfire protection criteria.

## 5. Assessment Against Bushfire Protection Criteria

Appendix B of the *Guidelines* (DPLH and WAPC, 2024a) provides details of the acceptable bushfire protection solutions that can be used to demonstrate how a location can be developed in bushfire prone areas.

### 5.1 Compliance Table

The compliance table focuses on ensuring that the subdivision design complies with Element 2: Siting and Design, Element 3: Vehicular Access, and Element 4: Water. Outcomes of how the Site will comply are provided in Table 4 with all compliance requirements able to be achieved.

**Table 4: Compliance Table**

Bushfire Protection Criteria	Method of Compliance – Method 1		Proposed Bushfire Management Strategies
	Acceptable Solutions		
Element 1: Location	A1.1a	Broader Landscape Type A	BLA outcome as described in Section 3.1 indicates that the Site is a Broader Landscape Type A and is compliant with Element 1: Location.
Element 2: Siting and Design	A2.1	Siting and Design	The development of this location is a continuation of development that is occurring within the broader ODP area to the northwest and is consistent with the design included with the 2007 and 2013 applications. Figure 14 demonstrates that a suitable APZ can be achieved for the Site.
	A2.2	Asset Protection Zone	The assessment process indicates that a suitable APZ can be demonstrated for all Lots (Figure 14), with no Lot rated higher than BAL-29.
	A2.3	Clearing of Native Vegetation	Clearing of native vegetation will occur within the Site boundary and where possible, for up to 100 m around the various development Stages to accommodate the subdivision (Figure 13). The original and current subdivision planning process has considered the value of the native vegetation, including vegetation to be retained within nominated conservation areas (Figure 1).

Bushfire Protection Criteria	Method of Compliance – Method 1		Proposed Bushfire Management Strategies
	Acceptable Solutions		
Element 3: Vehicular Access	A3.1	Public Roads	Public roads will be constructed in accordance with the technical requirements outlined in Column 2, Area 1 of Table 10 on page 103 of the <i>Guidelines</i> . Road design will be reviewed and approved by the Shire of Gingin prior to construction commencing.
	A3.2	Access Roads	Access and egress from the subdivision will be available to at least two different destinations available to the north through the existing development stages to Lancelin Road, to the west to Old Ledge Point Road (Figure 1, Figure 14), and in time, to Indian Ocean Drive to the east.
	A3.3a	No-through Roads	Some temporary no-through roads may be required until development to the east and south is progressed. If so, construction will comply with the requirements of a public road as detailed in Appendix B.3 Table 10, Column 2 of the <i>Guidelines</i> , and include a turn-around area/head as per Figure 30 of the <i>Guidelines</i> .
	A3.3b	No-through Road Requirements	Any temporary no-through roads will comply with the requirements of a public road as detailed in Appendix B.3 Table 10, Column 2 of the <i>Guidelines</i> , and include a turn-around area/head as per Figure 30 of the <i>Guidelines</i> .
	A3.4	Emergency Access Ways	As the development will be an extension of that being implemented within accordance with the current ODP, combined with the plan to clear for up to 100 m around development Stages where possible to do so, the need for an emergency access way is not envisaged.
	A3.5a	Perimeter Roads	The current subdivision design indicates a perimeter road will be constructed between areas of retained vegetation and the development (Figure 1, Figure 14).
	A3.5b	Fire Service Access Routes	N/A – fire service access requirements will be via the planned road network.
	A3.6	Battle-axe Access Leg	N/A – Structure Plan, Lot detail is not yet available (Figure 14)
Element 4: Water	A4.1	Water Supply for Structure Plans	A suitable reticulated water supply will be available from Lancelin South Water, with designs reviewed and approved prior to installation commencing.
	A4.2	Water Supply for subdivision applications	N/A – update of Structure Plan

Bushfire Protection Criteria	Method of Compliance – Method 1		Proposed Bushfire Management Strategies
	Acceptable Solutions		
	A4.3	Water Supply for existing Habitable Buildings	N/A – update of Structure Plan

## 5.2 Additional Bushfire Mitigation Measures

No additional bushfire mitigation measures than those outlined in this BMP will be required.

## 6. Responsibilities for Implementation and Management of the Bushfire Mitigation Measures

Required bushfire mitigation measures that will be implemented and maintained by the Developer until the Site is developed and Lots are sold are provided in Table 5. Also provided are an indication of the responsibilities of future lot and landowners and the maintenance requirements associated with the various responsibilities.

**Table 5: Bushfire Mitigation Measures**

Item	Mitigation Measure	Maintenance
<b>Landowner/Developer Prior to Sale or Occupancy</b>		
1	When development of the Site progresses, where possible, a low-fuel zone (APZ) up to 100 m, or the extent possible based on the Classified vegetation within and in proximity to the Site will be installed around active stages to prevent temporary BAL-ratings being applied to Lots under construction and facilitate future development activities.	Ongoing as required
2	If required, bushfire implications are reviewed for subdivision if there is a change in the area (m <sup>2</sup> ) of classified vegetation to be cleared or retained.	As required
3	The bushfire implications of any changes to the Site layout are assessed prior to being implemented.	As required
4	Hydrant design requirements will be in accordance with the Lancelin South Water Design Standard for hydrants: <ul style="list-style-type: none"> <li>▪ installation of markings to indicate the presence of hydrants</li> <li>▪ clearance on the placement of hydrants is required from Lancelin South Water</li> <li>▪ hydrants to be clearly identifiable, with markings installed by the developer after practical completion.</li> </ul>	As required during various future planning approval phases.
5	Public roads and no-through roads will be constructed in accordance with the technical requirements outlined in Column 2, Area 1 of Table 10 on page 103 of the <i>Guidelines</i> and be consistent with those constructed in surrounding areas, noting that road design will be approved	As required during various future planning approval phases.

Item	Mitigation Measure	Maintenance	
	by the Shire of Gingin prior to construction commencing.		
6	BAL-contours and ratings will be confirmed at various future planning approval phases.	At appropriate future planning approval phases, such as prior to the development of nominated subdivision stages.	
7	Comply with the Shire of Gingin's annual fire hazard reduction notice.	As per the requirements of the Shire of Gingin annual fire hazard reduction notice.	
8	Prepare a BMP compliance report to demonstrate that the relevant bushfire management measures have been implemented during subdivisional works to deliver compliance.	As required at each appropriate planning stage.	
<b>Landowner/Developer – Ongoing Management</b>			
1	Maintain vehicular access routes, including secondary access routes, within the development area to the required surface condition and clearances.	As required.	
<b>Developer – Prior to Issue of Certificate of Titles for New Lots</b>			
No.	Implementation Action	Local Government Clearance	Bushfire Consultant Clearance
1	Confirm the BAL-ratings of Lots within the subdivision, including confirming that a maximum BAL-29 rating can be achieved.		✓
2	Construct the public roads and no-through roads to the standards stated in the BMP.	✓	✓
3	Two access/egress options are available for each stage of the development.		✓
4	Clearing of vegetation to create the APZ to be undertaken in accordance with the BMP and land tenure.		✓
5	Hydrant and water supply is in accordance with Lancelin South Water requirements.	✓	✓
6	Ensure that bushfire risk and mitigation is reassessed when future phases of the development proceed.		✓

## 7. References

AS 3959:2018 *Construction of Buildings in Bushfire-Prone Areas*, (2018), Standards Australia, New South Wales.

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