



Officer West, Cardinia, Landscape Assessment
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Introduction

The Officer West, Cardinia, Landscape Assessment has been prepared to provide strategic guidance for future developments within the north-west section of the Officer PSP residential precinct (Figure 1), which recognises and seeks to protect visually significant landscapes.

The assessment provides an analysis of existing conditions and identifies landscape character units, listed below as:

- Suburban
- Farmland residential
- Farmland
- **Bushland** residential
- Bushland

Landscape strategies have been developed which recommend the strategic direction and required actions to accommodate for future development, whilst maintaining the landscape character and significant vegetation of the area.



Study Area Description

The study area comprises 50 properties located on the northern side of Princes Highway, Officer. The properties vary in size from approximately 0.1 hectares up to 27.30 hectares. The total subject site is 107.55 hectares in size.

The study area contains approximately 40 residential dwellings, located mainly along May Road and Whiteside Road, closer to Princes Highway. Most residences are single storey and vary in style, material and colour.

The study area's topography comprises a series of undulating slopes, the highest reaching an RL of 130 metres to the northern boundary of the site. A ridgeline crosses the study area towards the south, dividing it into east and west facing slopes that fall towards these boundaries.

The study area contains a mix of forested bush land areas and cleared areas. There are densely vegetated areas of bushland within the northern extents of the subject site.

May Road provides access to thirteen allotments within the study area. The remaining allotments have access off the Princes Highway and on some unsealed private access roads. The southern boundary is partially bounded by the Princes Highway. Whiteside road makes up part of the eastern boundary (south side) as well as providing access to around eleven allotments within the study area. The surrounding area consists of; agricultural land to the east, standard residential density to the south of Princes Hwy and west of May Road and a mix of forested bush land areas to the north.

The study area and its surrounding context are identified in Figure 1.





Planning Background

Zoning & Overlays

All properties within the study area are zoned Urban Growth Zone (UGZ) within the Cardinia Shire Council Planning Scheme. The minimum allowable lot size for this zone is 40 hectares, unless specified differently in a schedule to the zone.

Overlay controls within the study area include the Environmental Significance Overlay (ESO), the Wildfire Management Overlay (WMO) and a centrally located property having a Restructure Overlay (RO).

The Draft Officer Precinct Structure Plan

The Draft Officer Precinct Structure Plan (PSP) outlines the future direction in which the Officer community is to evolve and develop over time. The PSP includes the following recommendations relating to the future image, character and urban structure of the precinct.

Image & Character

The objectives for image and character that apply to the landscape assessment study area are to:

- Create a strong sense of place that is functional, safe and aesthetically pleasing.
- Create neighbourhoods and vibrant streets and spaces with their own distinct character that deliver environmental, aesthetic and functional benefits to the entire community.
- Preserve and capitalise view corridors to and from significant landscapes features and ensure development does not detract from the visual amenity of the area.
- To recognise the strong contribution that the ridgelines, valleys and the backdrop of the Dandenong foothills make to the landscape character of the region.
- To preserve the high environmental qualities on existing roads that have an anticipated low volume of traffic by providing a sealed rural standard.
- Provide lot diversity to compliment existing features of the site and create neighbourhoods with distinctive character.

The PSP identifies several zones within the landscape assessment study area including;

Within the south-west section of the study area is Low Density Residential area. This area is zoned in the PSP as CA1a – LDR A. The Planning and Design Guidelines that must be met are;

- Provide larger lots to ensure a natural transition between standard residential land and the Green wedge zoned land to the north of the precinct.
- Where possible, integrate existing vegetation in the development design.



Have regard to the topography and maximise view lines.

Within the north-west section of the study area is Low Density Residential area. This area is zoned in the PSP as CA1b – LDR B. The Planning and Design Guidelines that must be met are:

- Provide for larger lots that address the interface constraints of the WMO and Native Vegetation Precinct Plan (NVPP).
- Development and development is to have regard to NVPP and the WMO requirements.
- Ensure development does not dominate the landscape.

Within the northern section of the study area is Low Density Residential area. This area is zoned in the PSP as CA1c – LDR C. The Planning and Design Guidelines that must be met are;

- Subdivision and development is to have regard to NVPP and the WMO requirements.
- Setback development from ridgelines and significant view points.
- Provide for larger lots that retain and protect retain existing vegetation and address topography constraints.
- Ensure development does not dominate the landscape.

Following the western boundary of the study area is a Rural Interface Road partially along May Road. This area is zoned in the PSP as CA4a - Rural Interface Roads. The Planning and Design Guidelines that must be met is;

Provide sealed rural standard roads on low volume roads that have high environmental qualities.

Future Urban Structure

The Future Urban Structure for the study area identifies the distribution of land use area. The study area is largely zoned for future residential uses, however the Future Urban Structure plan has identified the following land uses within the study area;

Residential Land;

- Residential zoned land area is allocated to the south-west area, boarded by May road to the west, Whiteside Road to the east and Princes Highway to the south.
- Low Density Residential Land (minimum 0.1ha lots) is allocated to the central part of the study area.
- Low Density Residential Zone (minimum 0.4 ha lots) is allocated to the north-eastern part of the study area.
- Low Density Residential Land (minimum 2 ha lots) is allocated along the northern section of the study area.



Employment Land;

- A small area of Core Business is centrally allocated to the southern part of the study area, with the Princes Highway as a southern boundary.
- A small area of Service Business is located in the southern part of the study area, adjoining north of the Core Business area.
- Neighbourhood Activity Centre is allocated within the Core Business area (as above).

Open Space & Environment;

Public Open Space (encumbered) is centrally allocated within the Low Density Residential Land (minimum 0.1ha lots) area (as above).



Landscape Assessment Methodology

The methodology used to undertake this landscape assessment has been prepared in accordance with current best practice, as prescribed by *Visual Landscape Planning in Western Australia: A manual for evaluation, assessment, siting and design* prepared by the Environment and Sustainability Directorate, Department of Planning and Infrastructure, State of Western Australia, November 2007.

The methodology comprises a 3-step process for the landscape visual assessment, summarised as follows:

- 1. Describe the landscape.
- 2. Evaluate the landscape.
- 3. Develop objectives to manage visual landscape character.

The intention is to use these steps as a guide to undertake an evaluation of the landscape values of the study area, and to ascertain the capacity of the site to cater for future development whilst protecting identified landscape values.





Landscape Description

In order to develop a thorough understanding and appreciation of the landscape character of the site and surrounding landscape, we have visited the site and reviewed the following documents:

- Landscape Assessment, Casey Cardinia Urban Growth Area, Summary Report (2004)
- Draft Officer Precinct Structure Plan (2010)

The Landscape Assessment, Casey – Cardinia Urban Growth Area

The Landscape Assessment, Casey – Cardinia Urban Growth Area, Summary Report 2004 outlines the overall plan for Casey-Cardinia Growth Area. The following are a list of general characteristics that apply to the landscape assessment study area:

- While the land type does in many ways represent attractive land for future urban development and intensification, with its diverse spatial setting, which provides for a range of attractive views, it also presents serious constraints due to its visually exposed character. This is a character which could be drastically altered in very simple ways, such as appropriate development, even at low densities, or poor siting of roads and buildings.
- The general distribution of vegetation is the result of two key influence factors: "parent" land type and agricultural land use. Vegetation cover would naturally have been more extensive within the foothills and ridges than within other land types.
- Any development which is allowed on ridge lines should be set within a vegetated context, with requirements for revegetation and environmental enhancement as part of the development, and should consider views from public viewing points, particularly roads.
- Where creeks run through future developments, they should be a focus for recreational uses. Where possible, open space areas should be located close to, or within, the creek environs and secondary open space and the local street network should be integrated with and connected to trails located along the creek corridors.
- Proposed vegetation within the study area should be generally indigenous. This will not only reinforce the existing landscape character, but works the extension of a consistent and unifying landscape character into the future. Particular attention should be paid to the re-establishment of indigenous vegetation on slopes and ridges, reinforcing their visual backdrop role, and along creeks and drainage lines.



The Draft Officer Precinct Structure Plan

The Draft Officer Precinct Structure Plan (PSP) outlines the future direction in which the Officer community is to evolve and develop over time. The PSP includes the following recommendations relating to the future image, character and urban structure of the precinct.

Landscape Character

The following are a list of general objectives for landscape character for that apply to the landscape assessment study area:

- Preserve and capitalise view corridors to and from significant landscapes features and ensure development does not detract from the visual amenity of the area.
- To recognise the strong contribution that the ridgelines, valleys and the backdrop of the Dandenong foothills make to the landscape character of the region.
- Have regard to the topography and maximise view lines.

Landscape Character Units

Having observed the study area and its surrounds, and adopting the landscape character unit typologies similar to those prescribed in Visual Landscape Planning in Western Australia, 2007. The following landscape character units and their key visual attributes are listed below and illustrated in Figure 3:

Suburban

- High concentration of residential dwellings.
- Grid or curvilinear road pattern.
- Open space areas containing lawns and canopy vegetation.
- Presence of trees, greenery, parks and gardens, street trees, median strip vegetation.
- Complimentary building styles in neighbourhoods.
- Well maintained gardens (native and exotic vegetation).

Farmland Residential

- Large residential allotments.
- Open pasture areas.
- Distinctive remnant vegetation located along streamsides, roads and in paddocks (parkland clear paddocks).
- Diverse building styles in neighbourhoods.
- **Farmland**



- Open pasture areas.
- Gradual transition zones between agricultural land and natural landscape.
- Topographic variety and ruggedness.
- Presence of water bodies that borrow location, shape, scale and edge confirmation from natural elements.
- Distinctive remnant vegetation located along streamsides, roads and in paddocks (parkland clear paddocks).

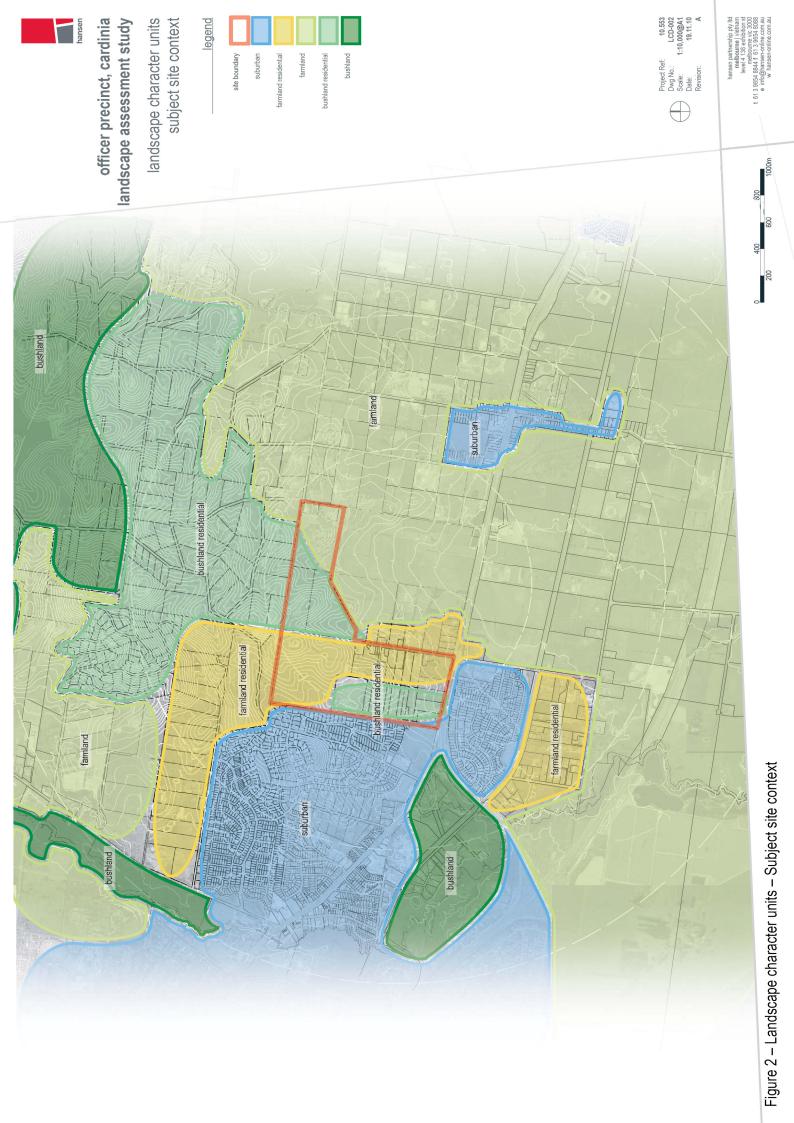
Bushland Residential

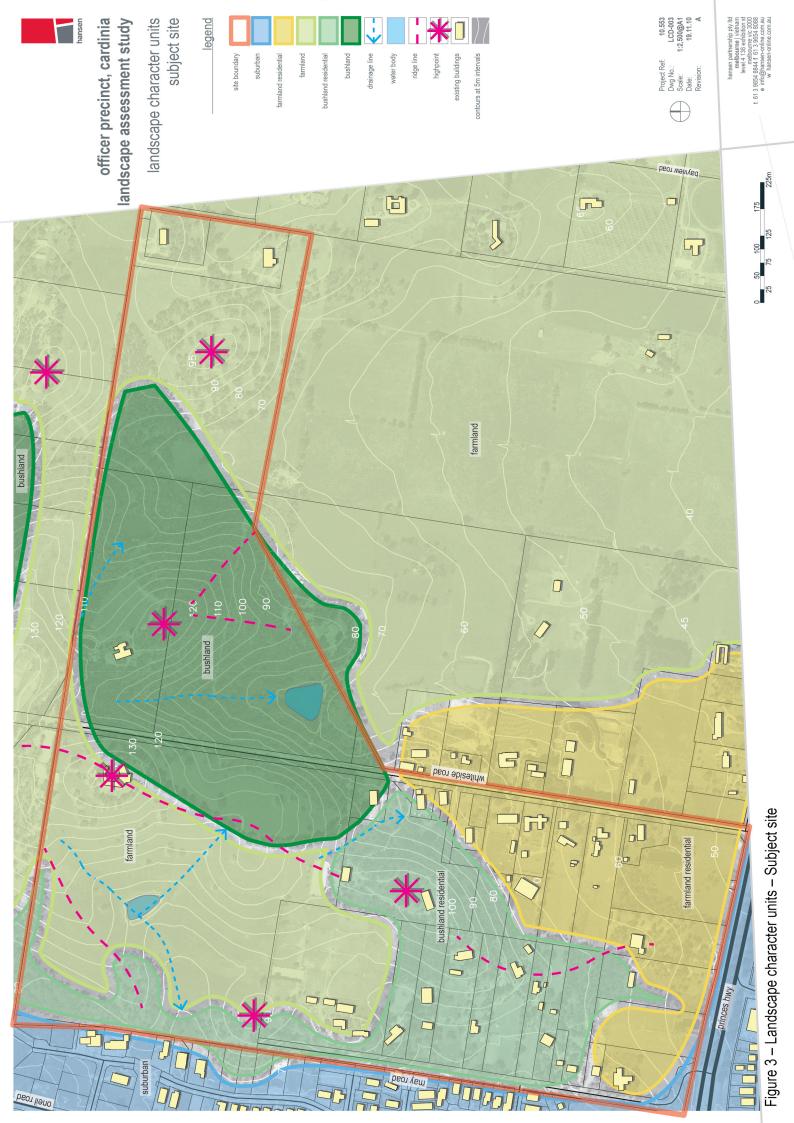
- Large residential allotments.
- Mix of forested bush land areas.
- Diverse building styles in neighbourhoods.

Bushland

- Heavily vegetated areas of canopy and understorey planting.
- Drainage lines and water courses.
- High degrees of perceived naturalness.
- High degrees of topographic variety or vertical relief.
- Presence of water bodies.

The study area can generally be described as exhibiting a balanced mix of Bushland and Farmland landscape character to the north, with specific elements of the Bushland Residential and Farmland Residential character type to the south, as illustrated in Figure 4.







Desktop Analysis

The desktop viewshed analysis uses computer software to develop a three-dimensional terrain model of the subject site and surrounding region. The model uses topographic data, comprising elevation information with 5m contour intervals.

The location of the selected viewpoints which have been recorded using Global Positioning System (GPS) and are inserted and positioned 1.6m above the ground level to replicate a typical viewing height. A light source is located at these elevated points and illuminates all areas of the terrain model which are visible from this viewing location. This 'line of sight' modelling provides an accurate viewshed replication from the key viewing location, but does not take into account the screening affects of buildings, vegetation and other elements within the landscape. In this regard, it suggests that visual exposure is much greater than in reality.

Oneil Road

Three viewpoints were selected to demonstrate the typical views of the study area available from Oneil Road, the locations and modelled viewsheds of which are illustrated in Figure 4.

View 1

This viewpoint has been selected as it provides the first direct view towards the study area from northern end of Oneil Road. The view location has MGA coordinates e358196, n5788065, located 161m west of the study area.

The valued landscape attributes of the study area visible in this view are;

- Gradual transition zones between agricultural land and natural landscape.
- Topographic variety.
- Heavily vegetated areas of canopy and understorey planting.

View 2

This viewpoint has been selected due to its central proximity to the west of the study area along Oneil Road. The view location has MGA coordinates e358107, n5787716, located 198m west of the study area.

The valued landscape attributes of the study area visible in this view are;

- Topographic variety and ruggedness.
- Mix of forested bush land areas.
- Heavily vegetated areas of canopy and understorey planting.



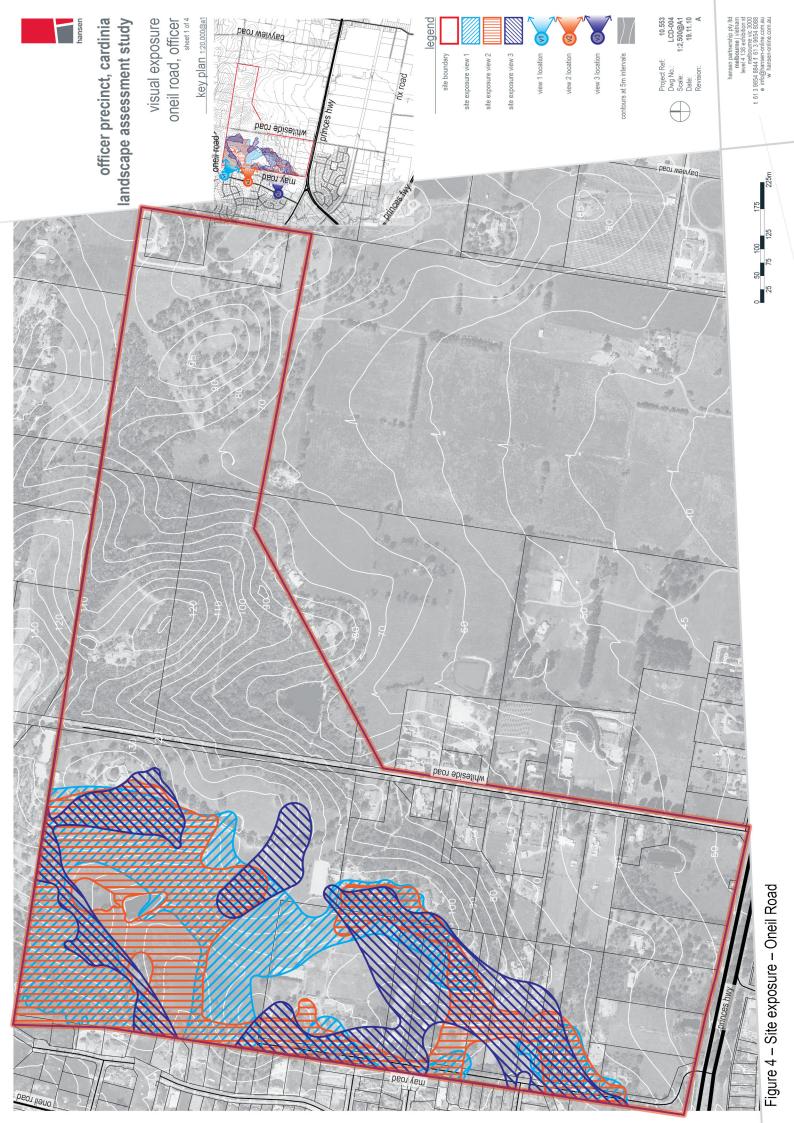
View 3

This viewpoint has been selected being the final view before the study area is out of view along Oneil Road. The view location has MGA coordinates e357917, n5787272, located 342m west of the study area.

The valued landscape attributes of the study area visible in this view are;

Mix of forested bush land areas.

Views available from view locations 1, 2 and 3 are illustrated in Figure 5.

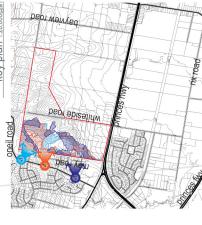




officer precinct, cardinia landscape assessment study

view locaion panoramas oneil road, officer

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oneil road, officer coordinates_e358196, n5788065



view 2 oneil road, officer coordinates_e358107, n5787716



oneil road, officer coordinates_e357917, n5787272

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Princes Highway

Three viewpoints were selected to demonstrate the typical views of the study area available from the Old Princes Highway and Princes Highway, south-west of the study area, the locations and modelled viewsheds of which are illustrated in Figure 6.

View 4

This viewpoint has been selected as it is the first available view to the study area for vehicles travelling east along the Old Princes Highway. The view location has MGA coordinates e357876, n5786934, located 330m west of the study area.

The valued landscape attributes of the study area visible in this view are;

- Gradual transition zones between agricultural land and natural landscape.
- Mix of forested bush land areas.
- High degrees of topographic variety.

View 5

This viewpoint has been selected as it is the last view along the Old Princes Highway, travelling east, before the road bends and the site is temporarily out of view. The view location has MGA coordinates e357669, n5786641, located 570m south-west of the study area.

The valued landscape attributes of the study area visible in this view are;

- Mix of forested bush land areas.
- Heavily vegetated areas of canopy and understorey planting.

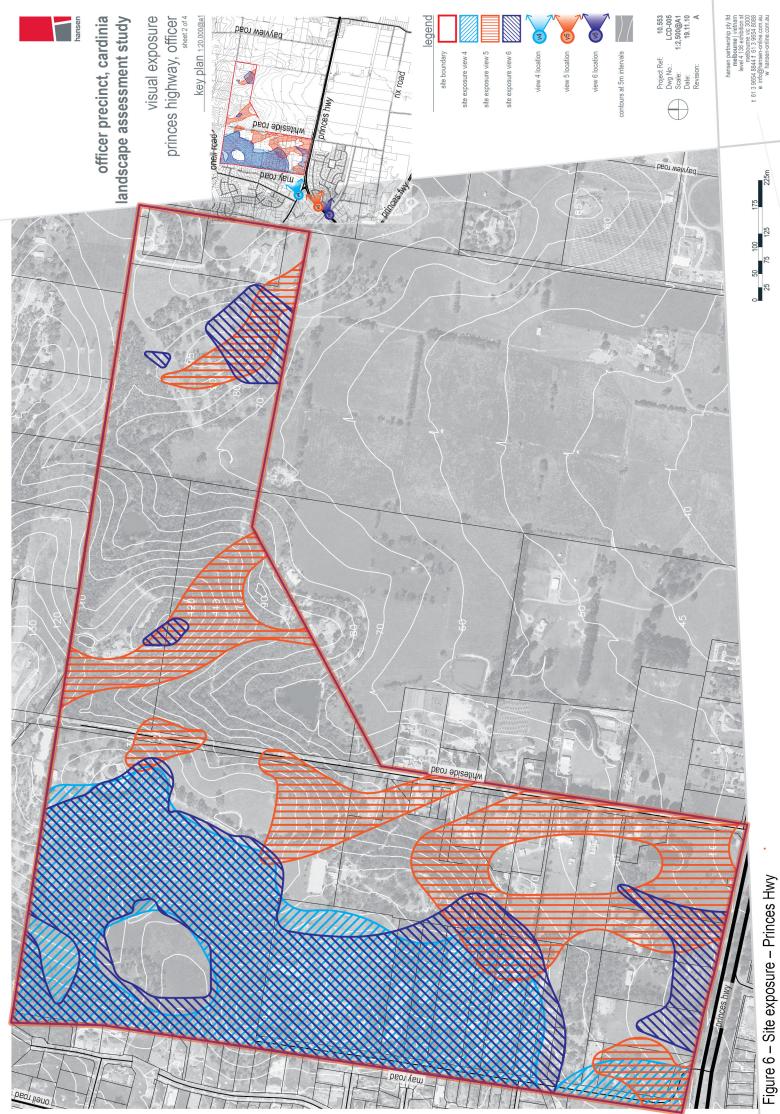
View 6

This viewpoint has been selected as it is the first view along the Old Princes Highway, travelling east. The view location has MGA coordinates e357559, n5786488, located approximately 765m north of the study area.

The valued landscape attributes of the study area visible in this view are;

- Mix of forested bush land areas.
- Topographic variety

Views available from view locations 4, 5 and 6 are illustrated in Figure 7.





officer precinct, cardinia landscape assessment study view locaion panoramas princes highway, officer

key plan 1:20,000@a1



old princes hwy, officer coordinates_e357876, n5786934







princes hwy, officer coordinates_e357559, n5786488

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Princes Highway

Three viewpoints were selected to demonstrate the typical views of the study area available from the Princes Highway and a suburban development, south of the study area, the locations and modelled viewsheds of which are illustrated in Figure 8.

View 7

This viewpoint has been selected as it is the most centrally prominent view within this suburban development south of the study area. The view location has MGA coordinates e358347, n5786470, located approximately 350m south of the study area.

The valued landscape attributes of the study area visible in this view are;

- Topographic variety.
- Mix of forested bush land areas.

View 8

This viewpoint has been selected for its central proximity to the study area for vehicles travelling east and west. The view location has MGA coordinates e358668, n5786698, located approximately 50m souh of the study area.

The valued landscape attributes of the study area visible in this view are;

Mix of forested bush land areas.

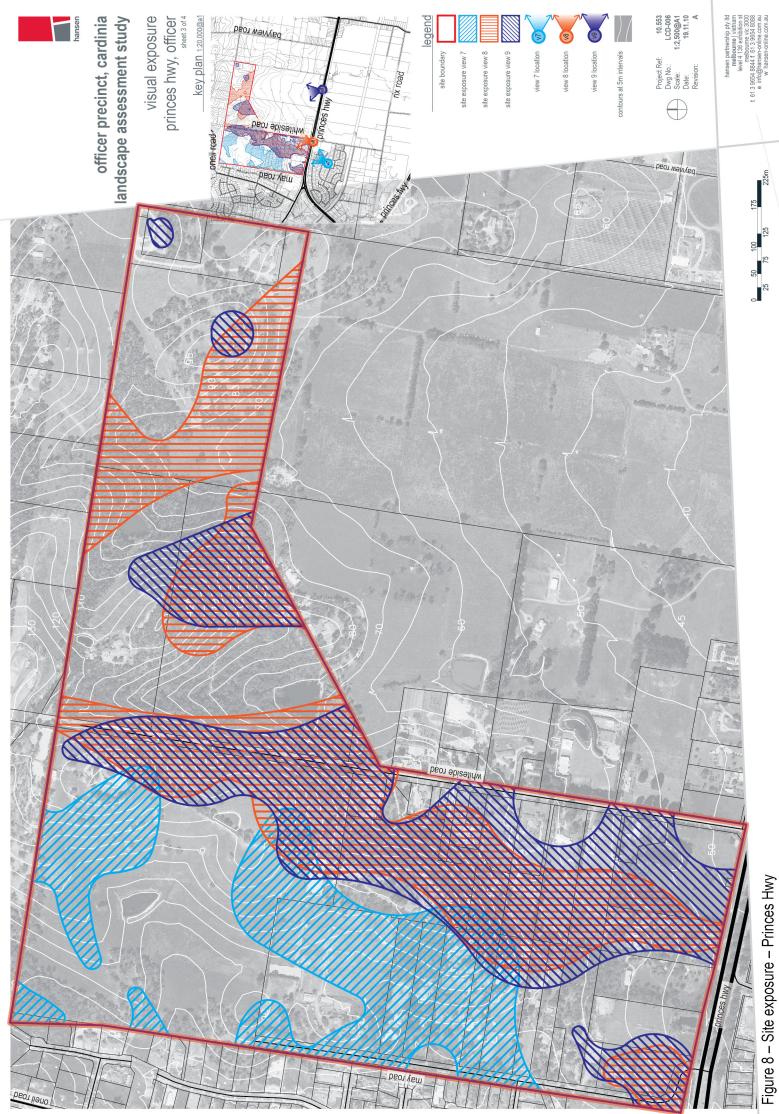
View 9

This viewpoint has been selected as it is the most prominent view of the study area on the Princes Highway facing west. The view location has MGA coordinates e359446, n5786561, located approximately 1000m north of the study area.

The valued landscape attributes of the study area visible in this view are;

- Gradual transition zones between agricultural land and natural landscape.
- Topographic variety.
- Mix of forested bush land areas.
- Heavily vegetated areas of canopy and understorey planting.

Views available from view locations 7, 8 and 9 are illustrated in Figure 9.





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landscape assessment study

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view locaion panoramas



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princes hwy, officer coordinates_e358668, n5786698



princes hwy, officer coordinates_e359446, n5786561



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Officer View Points

Three viewpoints were selected to demonstrate the typical views of the study area available from the multiple view points, east of the study area, the locations and modelled viewsheds of which are illustrated in Figure 10.

View 10

This viewpoint has been selected for its clear line of site and central location east of the study area. The view location has MGA coordinates e360178 n5787021, located approximately 1300m east of the study area.

The valued landscape attributes of the study area visible in this view are;

- Topographic variety.
- Mix of forested bush land areas.

View 11

This viewpoint has been selected for its proximity to the local retail and commercial area along Princes Highway. The view location has MGA coordinates e360355, n5786352, located approximately 1830m east of the study area.

The valued landscape attributes of the study area visible in this view are;

Mix of forested bush land areas.

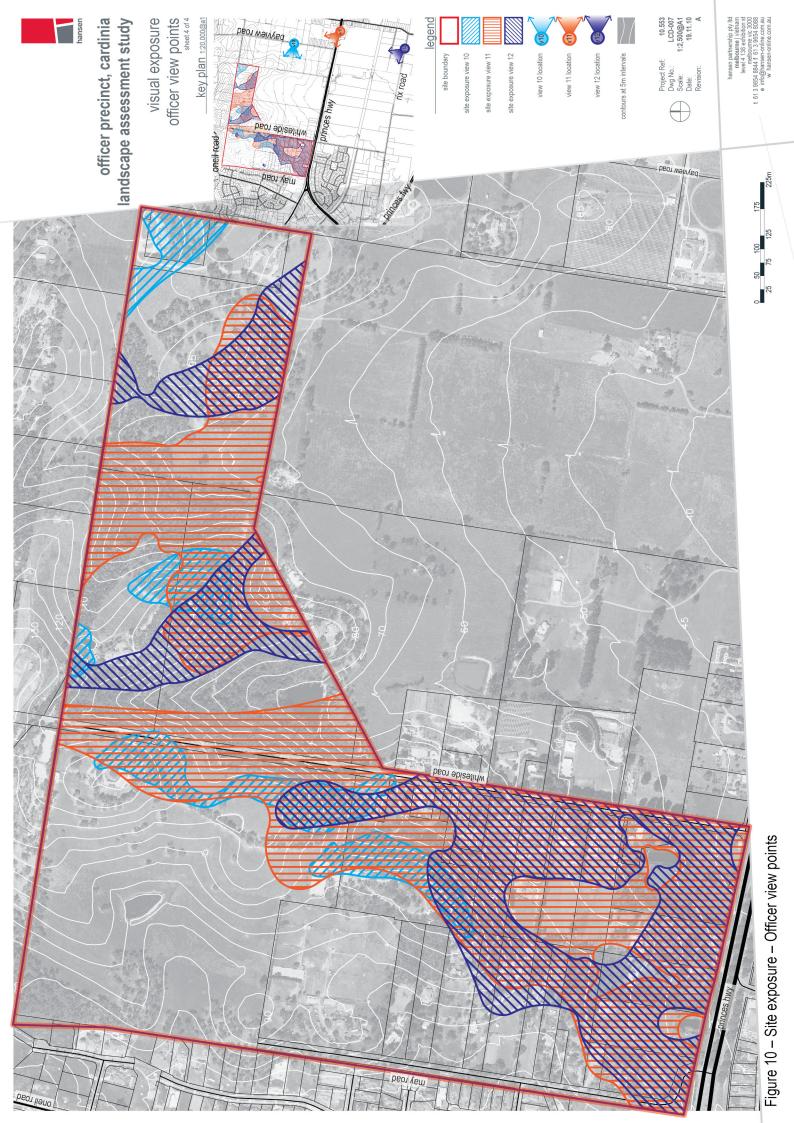
View 12

This viewpoint has been selected as it has a clear view line towards the study area along Rix Road. The view location has MGA coordinates e358347, n5786470, located approximately 2400m north of the study area.

The valued landscape attributes of the study area visible in this view are;

- Gradual transition zones between agricultural land and natural landscape.
- Topographic variety.
- Mix of forested bush land areas.
- Heavily vegetated areas of canopy and understorey planting.

Views available from view locations 10, 11 and 12 are illustrated in Figure 11.





officer precinct, cardinia landscape assessment study view locaion panoramas officer view points

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bayview road, officer coordinates_e360178 n5787021 view 10



view 11 princes hwy, officer coordinates_e360355, n5786352



coordinates_e358347, n5786470 view 12 rix road, officer

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Figure 11 - View location panoramas- Officer view points



Cumulative Assessment

The following visual exposure diagram demonstrates the relative visual exposure intensities of the study area, illustrated in Figure 12. There are 4 visual exposure intensity levels, which are; high, medium, low and very low. This is based on the number of view locations each area has exposure to and hence the more view locations an area is exposed to, the greater the visual exposure intensity level. The diagram identifies the most exposed areas as 'high site exposure', which are predominately located along ridge lines.

The valued landscape assets diagram identifies those valued landscape assets within the study area with the greatest visual exposure, illustrated in Figure 13. In order to accommodate new development without compromising its key visual qualities, there must be an overall understanding of the study areas; landscape values and relative visual exposure. The manner in which these characteristics combine to provide an understanding of the degree to which new development can be accommodated. Areas which have been identified with either high or medium visual exposure are the most sensitive to any change with respect to visual impact.

The strategies and objectives outlined in the following section have been developed to ensure a balance, whereby further development can occur in a manner which ensures assets are protected and that the visual attributes of the study area and its surrounds are maintained and enhanced.







Landscape Strategies

In order to ensure that any future development will not impact upon the identified landscape values of the study area, a series of landscape objectives and strategies may be incorporated into any future development plan for the study area. The landscape objectives and strategies are outlined as follows:

Landscape Objectives

- Protect existing vegetation within areas identified as having high and medium visual exposure.
- Establish new vegetation where possible.
- Establish a character of low-scale buildings in a treed setting.

Landscape Strategies

- Any development which is allowed on ridge lines should be set within a vegetated context, with requirements for revegetation and environmental enhancement as part of the development, and should consider views from public viewing points, particularly roads.
- Locate building envelopes to retain existing vegetation.
- Proposed vegetation within the study area should be generally indigenous, to reinforce the existing landscape character. Particular attention should be played to the reestablishment of indigenous vegetation on slopes and ridges, reinforcing their visual backdrop role, and along creeks and drainage lines.

The manner in which these landscape strategies can be implemented within the study area is illustrated in Figures 14, which provides typical treatments only for individual allotments that are located within all areas identified as having 'high site exposure' and all areas identified as having 'medium site exposure' which are also heavily vegetated. The incorporation of these strategies into any future development plan, which fall into the categories above, will ensure that the valued landscape attributes of the study area are retained and that views toward them from available and popular vantage points will not be detrimentally impacted upon.





Figure 14_Typical lot configuration for high and medium site exposure areas





Planning Scheme Implementation

The principal planning tool to protect vegetation and landscape character are overlays. An Environmental Significance Overlay (ESO) already applies to the whole extent of the study area and surrounding region. There are two remaining overlays that can be used to protect and manage vegetation; the Vegetation Protection Overlay (VPO) and the Significant Landscape Overlay (SLO).

VPP Practice Note 'Vegetation protection in urban areas, August 1999' provides guidance on how to assess the significance of vegetation in urban areas and how to protect significant vegetation through the planning scheme. The following questions help determine which overlay is most appropriate:

- 1. What is to be protected (individual or group of trees, area of habitat, etc.)?
- 2. Why is it being protected (heritage, scientific, cultural, landscape or habitat value)?
- 3. How should it be protected (protection of the root zone, requirements about buildings and works, subdivision)?

The VPO is specifically designed to protect significant native and exotic vegetation in an urban or rural environment. The SLO should be used when vegetation is primarily of aesthetic or visual importance in the broader landscape or where vegetation is identified as an important contributor to the character of an area.

In this case the VPO is not warranted as an ESO already applies to the study area, and in addition to the native vegetation provisions of Clause 52.17, it is considered there is sufficient planning control to prevent the unnecessary removal of significant vegetation. As a further safeguard, the Draft Officer PSP indicates the retention of all "ecologically valuable existing vegetation" illustrated in Figure 13 of this report that might otherwise be protected by a VPO.

However, the SLO is appropriate as it can be applied to specific areas to protect the aesthetic or visual importance of significant landscape elements. The SLO will recognise those areas that are highly visible from a number of vantage points and which contain a dense vegetation canopy. This will ensure future development within these areas respond to the specific permit requirements and landscape character objectives of the overlay.

The overlay would need to specify the following key elements:

- Statement of nature and key elements of landscape.
- Landscape character objectives to be achieved.
- Permit requirement.
- Decision guidelines.

The areas recommended where the SLO apply are illustrated in Figure 15. They include; all areas identified as having 'high site exposure' and all areas identified as having 'medium site exposure' which area is also heavily vegetated.





Bibliography

- Landscape Assessment, Casey Cardinia Urban Growth Area, Summary Report (2004)
- Draft Officer Precinct Structure Plan (2010)
- Environment and Sustainability Directorate, Department for Planning and Infrastructure, 2007, Visual Planning in Western Australia; a manual for evaluation, assessment, siting and design.
- Officer Precinct Structure Plan, Flora and Fauna Assessment, Victoria, Ecology Partners, July 2010.