

**OAKDALE WEST STATE SIGNIFICANT SITE
DEVELOPMENT APPLICATION
VISUAL IMPACT ASSESSMENT**





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Prepared by **e8urban pty ltd** for Goodman Group



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1.0 INTRODUCTION AND CONTEXT

PURPOSE OF THIS REPORT

This Visual Impact Assessment (VIA) has been prepared to assess the potential visual impacts of the proposed Oakdale West Estate.

The key outcome for the study is to present accurate visual representations of the proposed development in the context of the existing landscape and urban settlements, so that potential visual impacts on surrounding private and public receivers can be understood and, if appropriate strategies for mitigations provided.

The report has been prepared in-line with the Environmental Impact Assessment Practice Note Guideline for Landscape Character and Visual Impact Assessment EIA-N04.

SITE LOCATION AND CONTEXT

The site is located within the Penrith LGA, at the south western end of Old Wallgrove Road in Western Sydney. It is a 154 hectare parcel of land and is located within the Western Sydney Employment Area. The land is formally identified as Lot 11, DP1178389.

SITE FEATURES

The site is bounded to the North by the existing industrial development at Erskine Park and the Sydney Water Pipeline.

It is bounded to the south by existing large lot residential properties accessed from Baker Lane. The eastern boundary is shared with the approved Oakdale South Estate employment development and Ropes Creek. A 30 metre wide transmission line easement runs along the western edge of the site.

The western site boundary is formed by Emmaus Catholic College and an associated Seniors Living facility.

THE PROPOSED DEVELOPMENT

The proposed development is a new employment area consisting of 22 industrial buildings with varying floor plate sizes, up to approximately 14 metres in height, with associated service areas, public domain and landscape. Access to the site will be via the new North South

Link Road that forms a new connection between Lenore Road to the north and Bakers Lane to the south.

The adjacent diagram (Figure 1) indicates some of the key features of the local area including:

- ① Oakdale West Estate Site
- ② Oakdale South Estate Site
- ③ Jacfin Site (Currently under consideration)
- ④ Pazit Site (Approved subdivision)
- ⑤ Ropes Creek and Riparian Corridor
- ⑥ Greenwood Place
- ⑦ Capitol Hill Drive
- ⑧ Aldington Road
- ⑨ Erskine Business Park
- ⑩ Oakdale Industrial Estate
- ⑪ Emmaus Catholic College and Seniors Living development
- ⑫ Bakers Lane

PROFILE OF THE STUDY TEAM

This work has been lead by **e8urban** with specialist inputs from professional photographic, surveying and landscape architecture consultants.

e8urban director Joe Rowling, has undertaken a number of view studies for development proposals including sites within the St Paul's Cathedral View Corridor in London, the World and National Heritage listed Old Government House in Parramatta. **e8urban** also undertook the VIA for the approved Oakdale South SSDA.

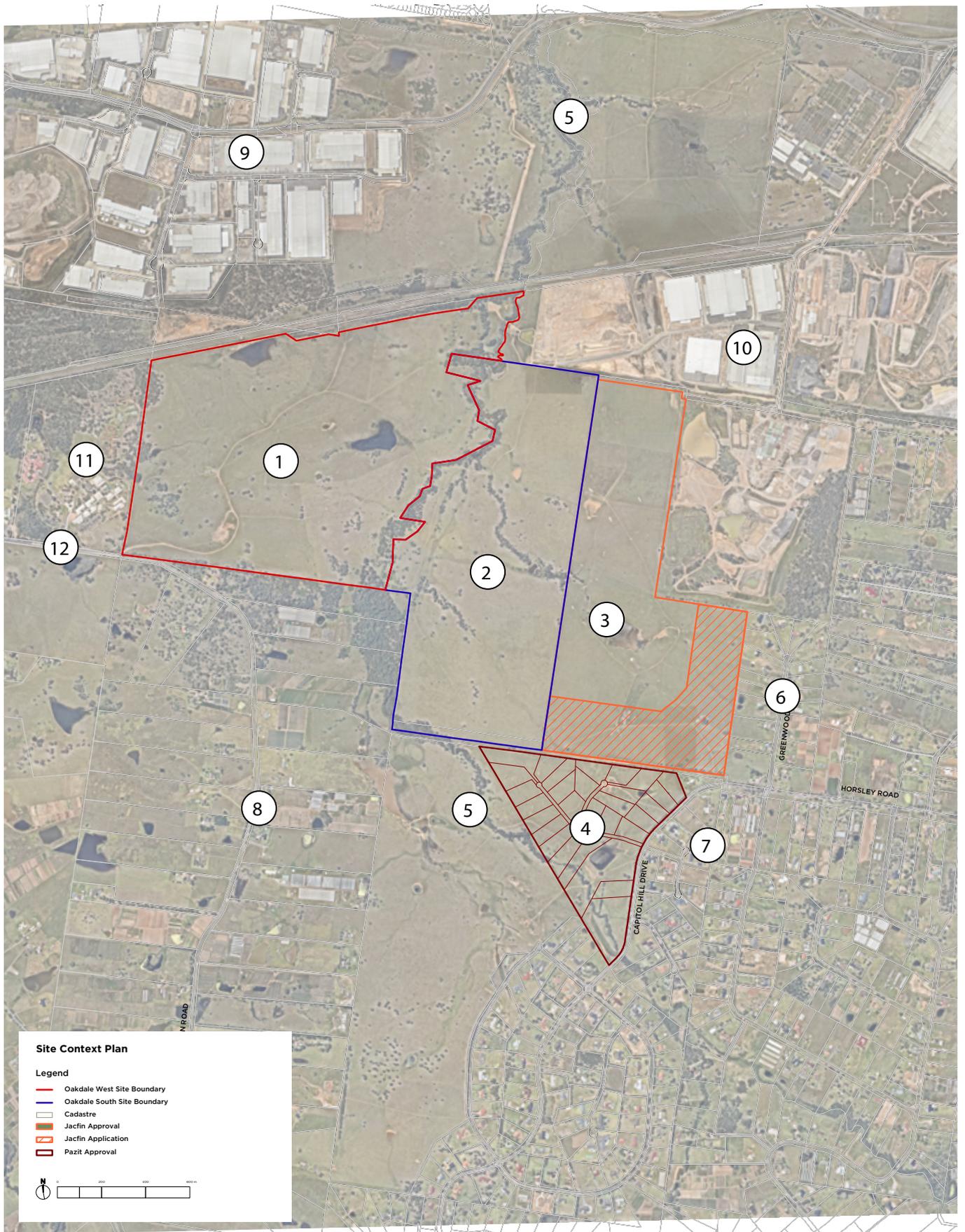


Figure 1: Site features

1.2 STATUTORY PLANNING CONTEXT

LAND USE ZONING

The adjacent diagram (Figure 2) shows the existing zoning around the Oakdale West Site, as a composite of the Local Environmental Planning Maps for the relevant Local Government Areas.

Land use on the Site is Governed by the State Environmental Planning Policy (Western Sydney Employment Area) 2009, and zoned IN1 (General Industrial).

The lands to the south and west which are potential visual receivers are zoned RU2 (Rural Landscape), with other land around the site a mix of zonings including E2 (Environmental Conservation), E4 (Environmental Living), RU2 (Rural Landscape) and RU4 (Primary Production Small Lots).

OBJECTIVES OF THE CURRENT PLANNING CONTROLS

The table on the following page sets out controls for development adjoining residential land the objectives of the current planning controls by land use zone.

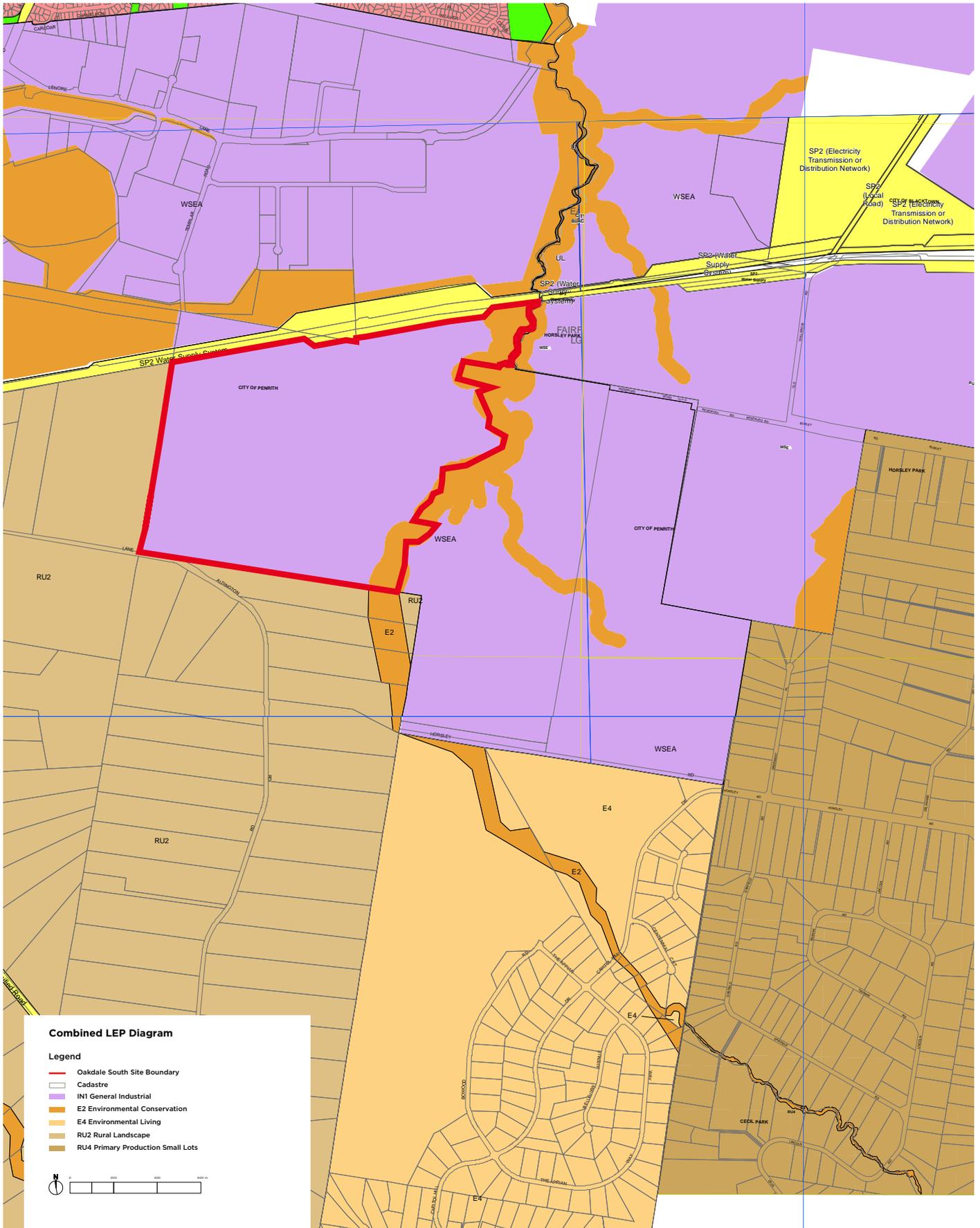


Figure 2: Existing Statutory Land Use Zoning

State Environmental Planning Policy (Western Sydney Employment Area) 2009

Part 5 Clause 23 - Development adjoining residential land

(1) This clause applies to any land to which this Policy applies that is within 250 metres of land zoned primarily for residential purposes.

(2) The consent authority must not grant consent to development on land to which this clause applies unless it is satisfied that:

- (a) wherever appropriate, proposed buildings are compatible with the height, scale, siting and character of existing residential buildings in the vicinity, and
 - (b) goods, plant, equipment and other material resulting from the development are to be stored within a building or will be suitably screened from view from residential buildings and associated land, and
 - (c) the elevation of any building facing, or significantly exposed to view from, land on which a dwelling house is situated has been designed to present an attractive appearance, and
 - (d) noise generation from fixed sources or motor vehicles associated with the development will be effectively insulated or otherwise minimised, and
 - (e) the development will not otherwise cause nuisance to residents, by way of hours of operation, traffic movement, parking, headlight glare, security lighting or the like, and
 - (f) the development will provide adequate off-street parking, relative to the demand for parking likely to be generated, and
 - (g) the site of the proposed development will be suitably landscaped, particularly between any building and the street alignment.
-

Part 2 Clause 11 - Zone objectives and land use table

Zone E2 Environmental Conservation

1 Objectives of zone

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
 - To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
-

Zone IN1 General Industrial

1 Objectives of zone

- To facilitate a wide range of employment-generating development including industrial, manufacturing, warehousing, storage and research uses and ancillary office space.
 - To encourage employment opportunities along motorway corridors, including the M7 and M4.
 - To minimise any adverse effect of industry on other land uses.
 - To facilitate road network links to the M7 and M4 Motorways.
 - To encourage a high standard of development that does not prejudice the sustainability of other enterprises or the environment.
 - To provide for small-scale local services such as commercial, retail and community facilities (including child care facilities) that service or support the needs of employment-generating uses in the zone
-

Penrith Local Environmental Plan 2010 Land Use Table

Zone RU2 Rural Landscape

1 Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
 - To maintain the rural landscape character of the land.
 - To provide for a range of compatible land uses, including extensive agriculture.
 - To minimise conflict between land uses within the zone and land uses within adjoining zones.
 - To preserve and improve natural resources through appropriate land management practices.
 - To ensure development is compatible with the environmental capabilities of the land and does not unreasonably increase the demand for public services or public facilities.
-

Zone E2 Environmental Conservation

1 Objectives of zone

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
 - To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
 - To protect, manage, restore and enhance the ecology, hydrology and scenic values of riparian corridors and waterways, wetlands, groundwater resources, biodiversity corridors, areas of remnant indigenous vegetation and dependent ecosystems.
 - To allow for low impact passive recreational and ancillary land uses that are consistent with the retention of the natural ecological significance.
-

Zone RU4 Primary Production Small Lots

1 Objectives of zone

- To enable sustainable primary industry and other compatible land uses.
 - To encourage and promote diversity and employment opportunities in relation to primary industry enterprises, particularly those that require smaller lots or that are more intensive in nature.
 - To minimise conflict between land uses within this zone and land uses within adjoining zones.
 - To ensure land uses are of a scale and nature that is compatible with the environmental capabilities of the land.
 - To preserve and improve natural resources through appropriate land management practices.
 - To maintain the rural landscape character of the land.
 - To ensure that development does not unreasonably increase the demand for public services or facilities.
-

Zone E4 Environmental Living

1 Objectives of zone

- To provide for low-impact residential development in areas with special ecological, scientific or aesthetic values.
 - To ensure that residential development does not have an adverse effect on those values.
 - To minimise conflict between land uses within the zone and land uses within adjoining zones.
 - To ensure land uses are compatible with the available infrastructure, services and facilities and with the environmental capabilities of the land.
 - To preserve and improve natural resources through appropriate land management practices.
-

1.3 THE SITE

The project site comprises of 154 hectares of generally open land.

The site has a varied topography, and a number of different boundary conditions. There is currently a single farm house located in the center of the site.

The adjacent diagram (Figure 3) highlights some of the key site features.

TOPOGRAPHY

The site generally falls from south to north and east to west. There is a long ridge that runs through the middle portion of the site on a north south alignment, with several spurs coming off it to the east and west. The Ridge has a high point at RL. 92 close to the southern boundary.

The fall along the eastern boundary is less pronounced falling from RL. 64 in the north to RL. 60 in the south.

VEGETATION

The eastern and southern site boundary are both heavily vegetated with mature trees, providing a natural buffer between the site and adjoining properties. The western boundary has pockets of mature vegetation on the site boundary with significant clusters around the buildings that comprise the Emmaus Seniors Living development.

SITE INTERFACES

North

The site is bounded to the North by the existing Sydney Water Pipeline and industrial development.

South

It is bounded to the south by farmland and suburban development. A single residential property is located on this boundary. The property is access off Bakers Lane and consists of a main house and associated granny flat approximately 20 metres from the shared boundary.

East

To the east it is bounded by Ropes Creek and Oakdale South Estate and to the west by Emmaus Catholic College & Seniors Living development.

A spur from the main north south ridge line within the site intersects the boundary with Emmaus Catholic College. The main building of the college are approximately 45 degrees off north and are sited at approximately RL. 50 to RL. 58.

West

Ropes Creek to the east is a creek and associated riparian area. The creek corridor has numerous mature tress and established ground cover.

VISUAL CHARACTER

The panoramic photos on the following pages give an indication of the character of the site.

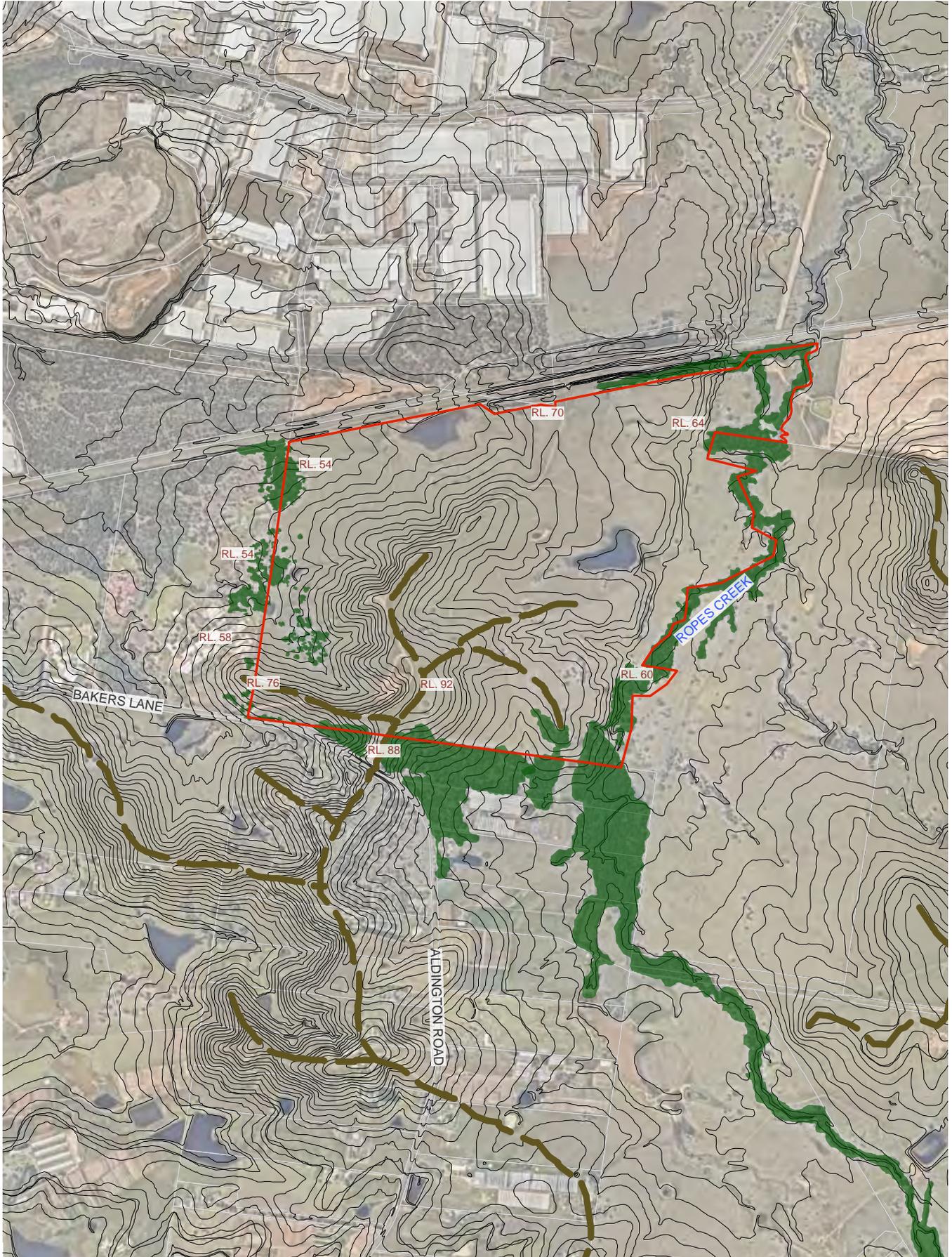


Figure 3: Key Site Features





Figure 4: View looking to the north taken close to the western boundary



Figure 5: View looking west along the northern boundary with the Sydney Water Pipeline in the to the right of the image



Figure 6: View looking towards the southern boundary showing the granny flat of the adjacent property on Bakers Street



Figure 7: View to the existing farmhouse in the center of the site looking west

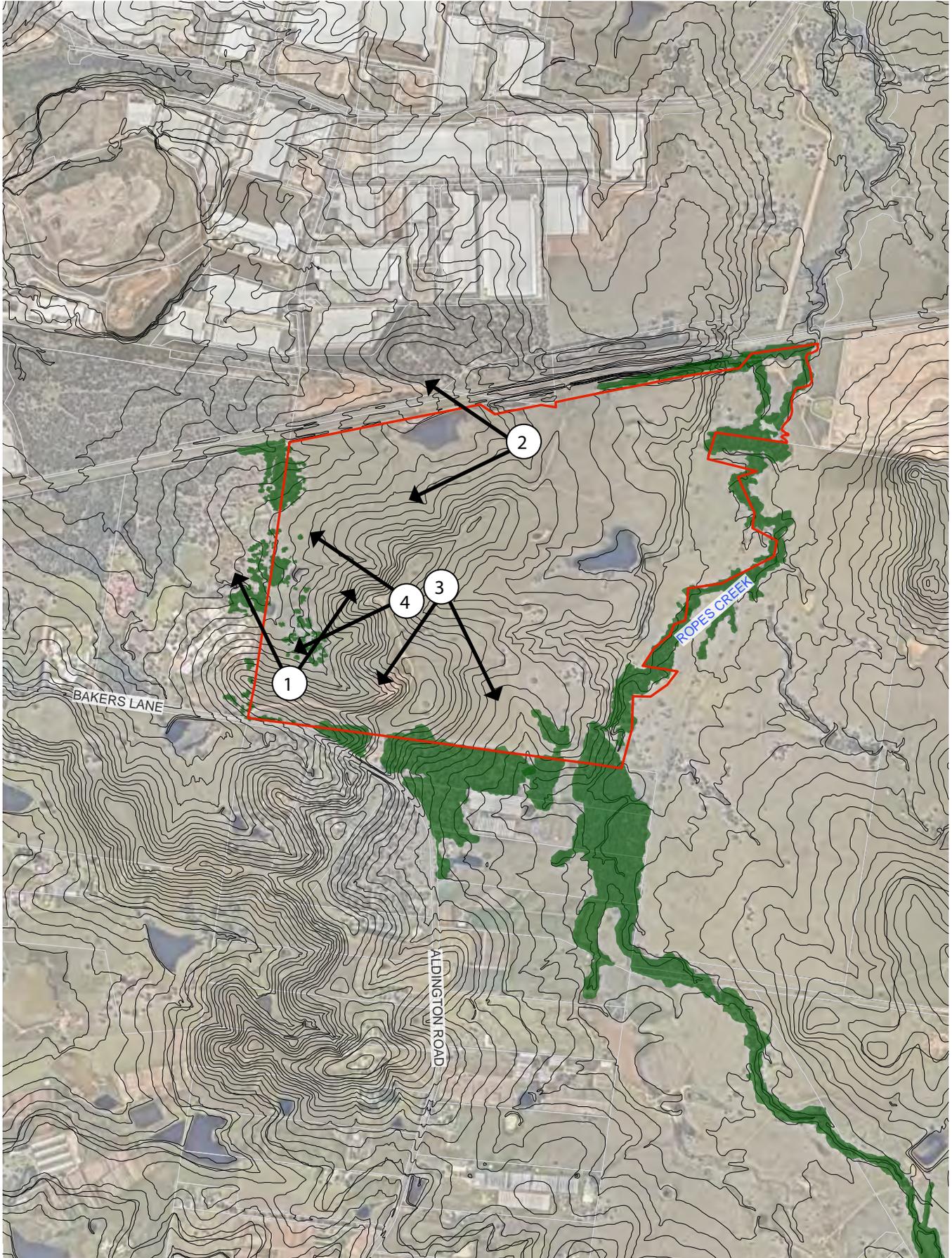


Figure 8: Panorama Photo Locations



THE MASTER PLAN**Anticipated land uses**

The master plan and indicative buildings would offer a range of large flexible building footprints.

These buildings would offer flexibility for a number of employment uses consistent with the objectives for the Western Sydney Employment Lands and IN1 industrial zoning.

The uses may include high quality industrial, commercial and distribution development.

Site Layout

The Master Plan drawing (Figure 9) below shows the proposed site layout, and indicative building footprints.

The site layout has been developed according to the existing structure plan and responds to site features such as Ropes Creek and existing and proposed infrastructure.

The development will provide a mix of 22 large and small footprint buildings consistent with the permitted land use.

The site planning is arranged along the main estate road that runs around the edges of the site and provides access into individual building allotments.

There are three key constraints influencing the eastern side of the site, Ropes Creek, the Ausgrid power line easement and the future Southern Link Road corridor. Building lots on the eastern side of the site are arranged to suit these constraints.

Building sites on the western side of the SLR have been arranged to reflect site topography and provide setbacks to the adjacent development.

The buildings along the southern site boundary are sited to closest to the site boundary, although pockets of open areas have been located in breaks between the buildings in the area adjacent to the existing residential property to Bakers Lane.

Proposed changes to land form

The master plan will require significant change to the level across the site.

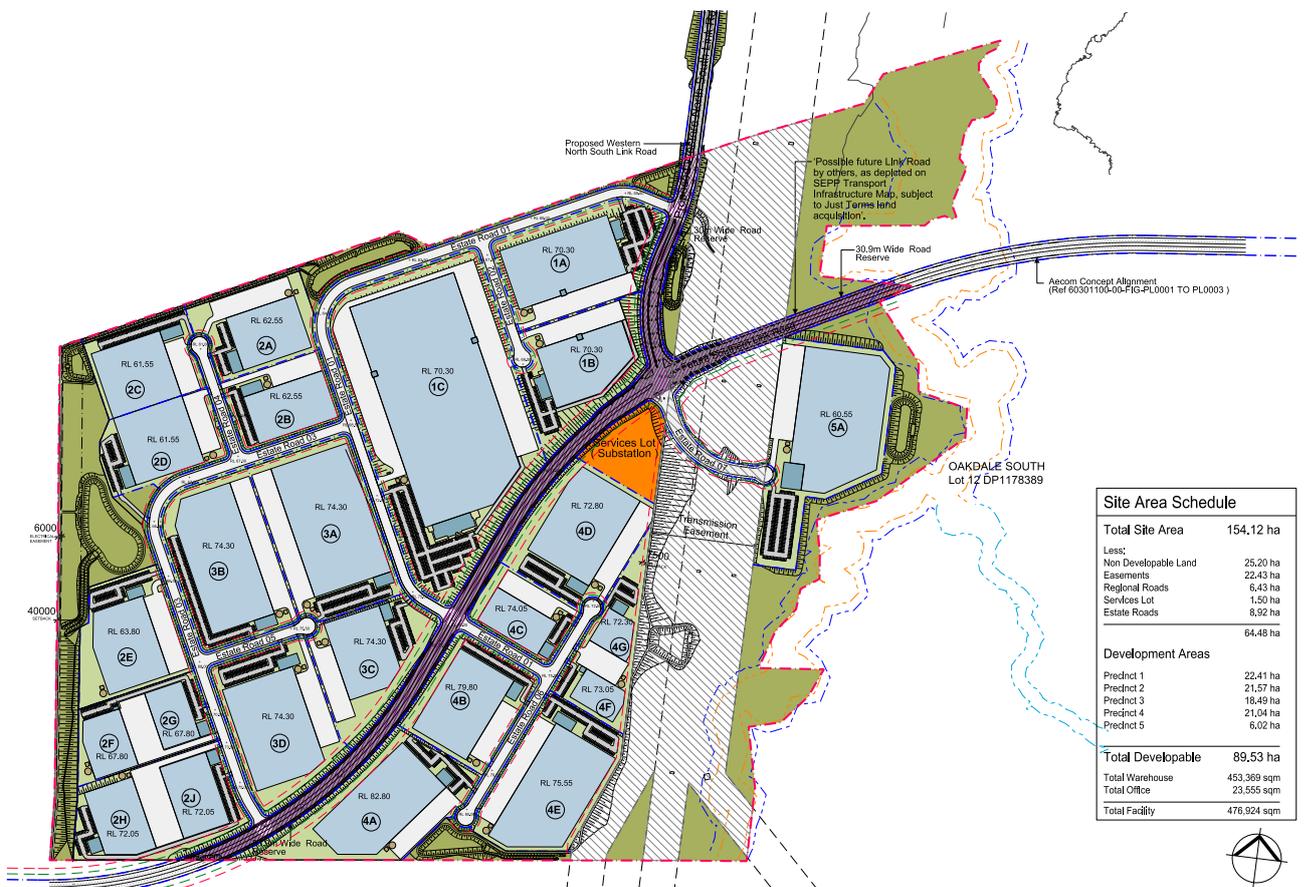
The major change to existing ground levels will be the cutting of the major ridge line and spurs that runs from the south to the north of the site. The ground level at the existing high point in the site will be lowered by over ten metres - from an existing high point around RL. 92 being reduced to approximately RL. 80.

The level change along the eastern and western boundary will be limited due to the presence of mature vegetation that will be retained.

Site grading and retaining walls will be utilised along the western and southern boundaries to manage level changes.



SEE DRAWING OAK MP03 FOR CONTINUATION



Site Area Schedule	
Total Site Area	154.12 ha
Less:	
Non Developable Land	25.20 ha
Easements	22.43 ha
Regional Roads	6.43 ha
Services Lot	1.50 ha
Estate Roads	8.92 ha
<hr/>	
Total Developable	64.48 ha
Development Areas	
Predict 1	22.41 ha
Predict 2	21.57 ha
Predict 3	18.49 ha
Predict 4	21.04 ha
Predict 5	6.02 ha
<hr/>	
Total Developable	89.53 ha
Total Warehouse	453,369 sqm
Total Office	23,555 sqm
Total Facility	476,924 sqm



Oakdale West Estate
Horsley Park

SSDA Estate Masterplan

1:3000 @ A1
1:5000 @ A3
25 Jan 2017
OAK MP 02 (X)

Figure 9: Proposed Master Plan (Source SBA Architects)

LANDSCAPE STRATEGY

The master plan includes a landscape strategy that address the public domain and residue landscape areas across the site.

Site Edges

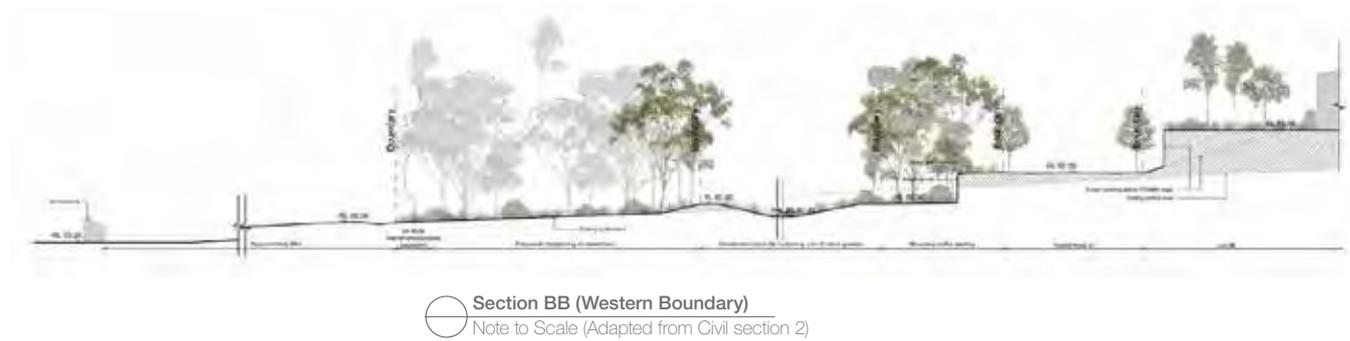
A landscape edge treatment and design has been developed for the site boundaries.

The edge consists of mature tree planting that will typically reach height of up to 25 metres set in landscape zones, dense ground cover will provide further low-level planting in these zones.

Figure 10 shows the landscape architects proposal for the typical edge treatment on the western and southern boundary.

The proposed planting will consist of native species and is detailed in the Landscape Concepts Report.

Boundary Treatment

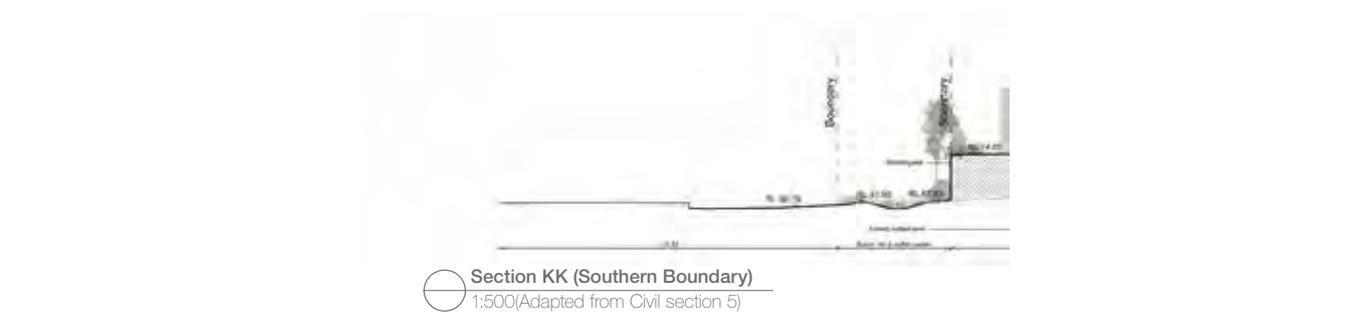




 Prepared by:  **Oakdale West |**

Client Site Image Job Number	Goodman SS15-3113	Drawing Number Issue Date	LR-0017 C 25.01.2017
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Boundary Treatment





 Prepared by:  **Oakdale West |**

Client Site Image Job Number	Goodman SS15-3113	Drawing Number Issue Date	LR-0021 C 25.01.2017
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Figure 10: Proposed Edge Landscape Treatment (Source Site Image)

2.0 STUDY METHODOLOGY

STEPS IN THE PREPARATION OF THIS STUDY

1. Identification of views

Having undertaken the VIA for the neighbouring Oakdale South development the project team already had a good understanding of the view potential for local public and private receivers.

With this background three views that were assessed for the Oakdale South development have been assessed again, and a further three new views have been selected for visual assessment.

The selection of view points was informed by the following:

- To, where possible, be representative of views from private land holdings such as existing and proposed development lots.
- To select views where the development would be most prominent such as high points, places where the proposed development addresses public roads or zones with clear lines of sight to the proposed development.
- To capture views from important public domain elements such as open space or landscape corridors
- A consideration of the location of existing approvals such as Oakdale South, the Jacfin Site and Pazit Lands along Capitol Hill Drive.

Prior to the site visit a 3D topographical model was produced using 2 metre GIS contour data obtained from Land and Property Information NSW. This tool was used to understand potential view points prior to the site inspection and the final selection of view points that occurred on site where the final four view points were selected.

View 01 in this study from Greenwood Place (taken from the boundary of 21-26 Greenway Place) has been taken from a similar position as the View 02 photo montage found in Appendix 2 of the Planning Assessment Commission Report dated 28 October 2013 for the Jacfin

development. The other views presented in Appendix 2 were not considered as the proposed Oakdale West development would be screened behind the approved Oakdale South and Jacfin developments.

2. Site Visit

A site visit was undertaken and the final view locations selected, recorded and surveyed for accurate geo-location.

3. Description of Views - Features, Value and Contribution to the Character and Setting of the Locality

Views occur over distance and generally include three main zone, the foreground [viewing position to 150 - 500m], middle ground [500m to 1.5 km] and background [1.5km to infinity]. In open landscape these may blend into one another.

Where relevant the features of each view has been described according to these zones and their contribution to the local character and setting.

The character and setting has been described following the site visit with regard to the following considerations:

- The land form, vegetation, water bodies, structures and public domain
- The visual quality of the view, it's expanse, uniqueness or variety

The locations of views have been plotted on a Composite Plan (Figure 6 in the following section) showing the proposed development in the context of the locality and other recently approvals.

4. Evaluation of View Value

As part of the study the team has made an evaluation of each view being assessed. The considerations to establish the value of the view include but are not limited to, relative expanse and openness, the nature and extent of the horizon, natural land-form and features and the extent of modification.

5. Production of Surveyed Views

A Surveyed View differs from a typical CGI [Computer Generated Image] in that

it's purpose is not to market a building or development rather it is to provide an accurate representation of a building or development in it's physical context and setting.

There are three main inputs into the production of Surveyed Views, these being:

- Accurate CAD documentation
- On site professional photography
- On site surveying from the location of the photography

The following steps were taken in the production of the four views that have informed this VIA:

i. CAD plans, site surveys and 3D models was provided by SBA Architects Pty Ltd. These files were inserted into a new 3D model using 3D Studio Max, a CAD software package. The model is located in global space so that the RL levels of the site and proposed development can be accurately set

ii. A site visit is undertaken with a photographer and surveyor. The photo locations are confirmed and the following locations surveyor for each photo:

The location and RL of the camera
Reference points that are visible in the photo for the foreground, and middle ground. These maybe kerb lines, roof lines, tree trunks, power pylons, or fence posts. If no reference points are available, then surveyors poles are located within the view and surveyed.

iii. The photography proceeds with the following camera and lens used:

Camera: EOS 7D MKii

Lens: EF 24-105mm f/3.5-5.6 IS STM

iv. The surveyor provides a 3D CAD file with all the surveyed points in global space and the photographer provides the photographic files in RAW format with the lens, depth of field and

image size provided.

v. The 3D model is updated and overlaid on the site photograph, from this a series of images are produced:

The unaltered image

The proposal identified as a red outline

The proposal 'cut into' the image in the correct location with foreground and background images correctly layer

The proposal and other relevant proposals in the local area in the same image

The proposed landscape treatment to the edges of the site

6. Evaluation of Visual Impacts

The potential impacts will be evaluated based on the Surveyed Views.

The potential impacts will be based on an evaluation of the proposal on the visual character and setting of the development. The evaluation will also assess the relationship between the approved Jacfin development and the Oakdale West Proposal.

Using the recognised Landscape Character and Visual Impact Grading Matrix, an Assessed Visual Impact will be established based on the Sensitivity of the view and the Magnitude of the Impact.

If the conclusion from the review of the Survey Views is that the development unreasonably detracts from the visual character of the locality on or more of the following recommendations made be made:

- That the orientation or siting of buildings be altered
- That the heights of buildings be modified
- That landscape features such as land forms or planting be located to screen the development

3.0 VISUAL CHARACTER AND VIEW SELECTION

3.1 THE EXISTING CHARACTER

EXISTING CHARACTER ZONES

The adjacent diagram (Figure 11) highlights our analysis of the existing character zones around the Oakdale West site. The diagram also highlights the areas where existing or intended future zoning proposes a change in the existing land use or Character Zone.

The Character Zones are as follows:

Existing Character - Open Agricultural Land

Generally open landscape with rolling hills, drainage lines and clusters of mature trees. Any structures are detached single storey farm buildings or agricultural sheds.

Existing Character - Large Lot Residential

Predominantly single and two storey homes set on large blocks (1,000 sqm). The street scape is generally suburban or rural in nature. Landscape is provided through planting in private gardens and remnant vegetation.

Existing Character - Productive Large Lot

Larger residential lots (1 ha to +2 ha) that have some form of small scale agricultural use. The street scape is generally rural in nature. Landscape is provided through planting in private gardens and remnant vegetation.

Existing Character - Riparian Land

The Ropes Creek Corridor runs north to south along the eastern site boundary. The immediate vicinity of much of the creek is defined by mature native vegetation, drainage lines and a flat topography.

Existing Character - Native Woodlands

There are several areas around the site where remnant native vegetation is present.

Existing Character - Institutions

The land along the western boundary of the site has a institutional character which is generally derived from the educational and residential buildings and associated landscape present.

Existing Character - Industrial and Employment

Large areas around the site to the north and east have established employment and industrial uses. These areas are defined by large floor plate sheds and office buildings. Landscape is provided through street tree planting within the access streets that serve the industrial estates and remnant vegetation that have been retained. Modifications to the landscape consistent with this development type has led to a less varied topography.

PLANNED FUTURE CHARACTER

The WSEA strategy and Existing DA's could result in further changes to the character of the area around the site.

Planned Future Character - Large Lot Residential

Existing DA's and rezoning to land to the east of the site will likely result in a continuation of the Large Lot Residential Character Zone in the east.

Planned Future Character - Industrial and Employment

The WSEA Strategy identifies Lands to the south of the site as being suitable for future employment uses. It could be expected that this would result in future change to the existing character in these areas.

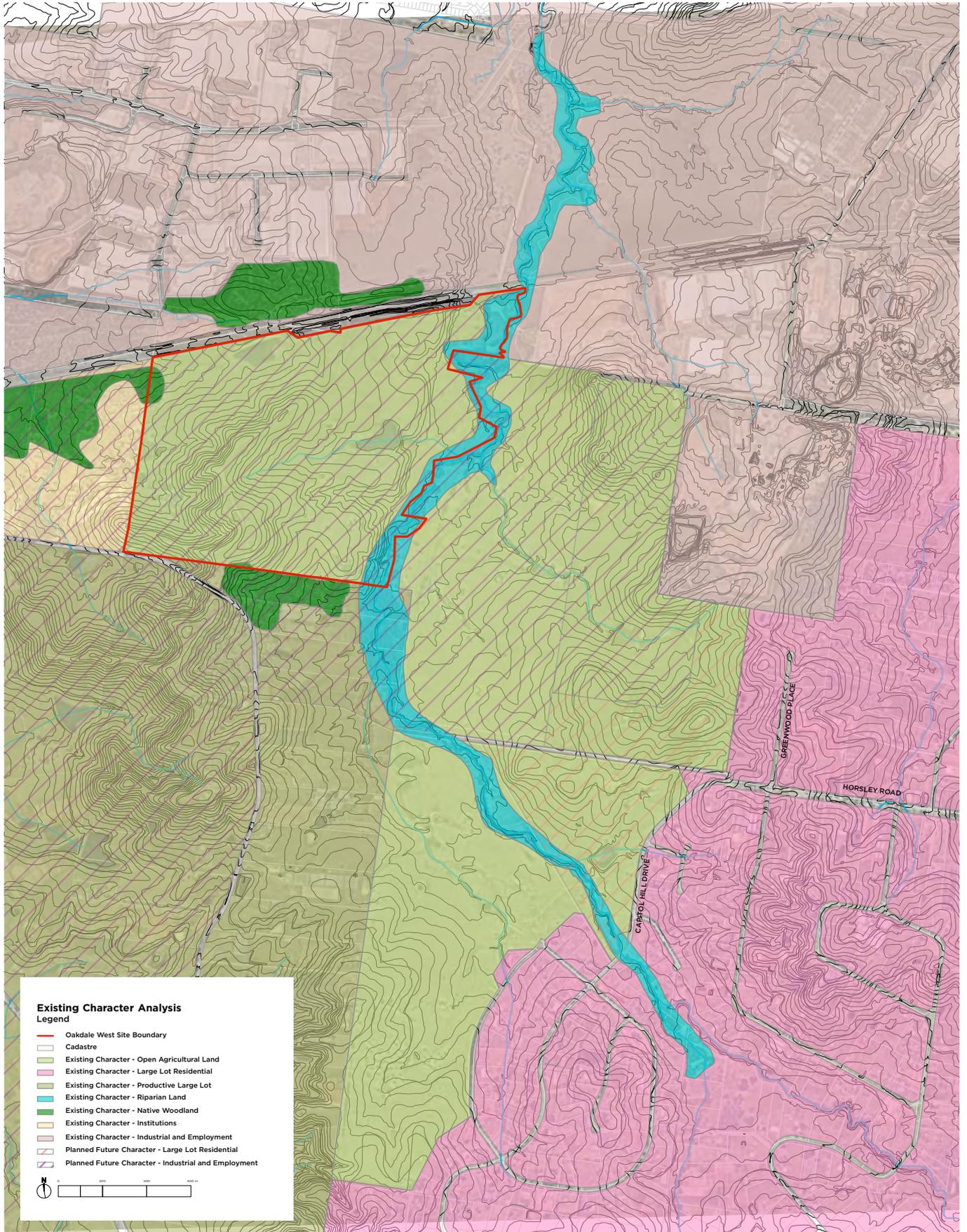


Figure 11: Existing Character Analysis

3.2 VISIBILITY POTENTIAL

TOPOGRAPHIC AND LANDSCAPE ANALYSIS

The adjacent diagram (Figure 12) utilises CAD modeling and aerial mapping to establish the areas in the immediate vicinity from which the proposed Oakdale West Development may be visible.

The analysis consisted of the following:

- Development of a 3D model based on 2m contours obtained from Land and Property Information NSW
- Mapping the location of aggregations of trees
- Mapping the alignment of ridge lines and other topographic features

The analysis suggests the following elements will screen the development from surrounding private and public receivers.

- 1 Ridge line that runs north to south close to Greenway Place and associated spurs will obscure some of the site
- 2 Ridge line extending through the Pazit Site obscures views to the site from Capitol Hill Drive and southern portions of the Pazit Site
- 3 Avenue tree planting along the west edge of Capitol Hill Drive filters view to the site
- 4 Ropes Creek and Riparian Corridor have significant mature trees that block views to the site from the south, and south west
- 5 Ridge line running north south blocks views to the site from the southern portion of Aldington Road and dissects the site
- 6 Mature trees block some views to the site from the residential area of Aldington Road to the south of the site
- 7 Mature trees on the western site boundary block some views to the site from Emmaus Catholic College and adjacent Emmaus Residential Aged Care