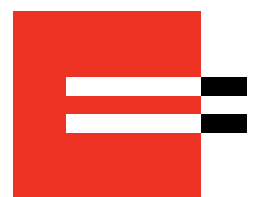




RIVERSTONE EAST  
LANDSCAPE & VISUAL ASSESSMENT  
SEPTEMBER 2014

COX



PLACE  
PLANNING  
DESIGN  
ENVIRONMENT



Riverstone East  
Landscape & Visual Assessment

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Revision	Date	Description	By	Chk	App
01	26.09.14	Draft Report - For review	PK	DM	DM
02	24.10.14	Draft Report - Revised as per DP & I comments	PK	DM	DM



## Executive Summary

### Introduction

The visual and landscape analysis study has been prepared for the Department of Planning and Environment as a part of the preparation of an Indicative Layout Plan for the Riverstone East Precinct. The Riverstone East Precinct (hereafter know as the site) is part of Sydney's North West Growth Centre. The NSW Government has identified the Precinct of Riverstone East to accommodate approximately 5,300 dwellings or in the order of 15,000 future residents. There is potential for this to increase. Further opportunity will be provided to review the final draft ILP for exhibition and provide comment.

This report has been prepared in close consultation with the project master planning team and with reference to previous studies with regards to the close proximity of the historically and culturally significant Rouse Hill House Estate located to the north east in the adjoining Precinct of Area 20.

### Structure of the Report

The Landscape and Visual Analysis report aims to set out the following:

Analysis and mapping of existing conditions;  
Visual sensitivity assessment of the site;  
Opportunities and constraints with regard to future development and possible mitigation measures or objectives to help reduce the impact of said development on Rouse Hill House Estate (RHHE) and the prevailing rural landscape character of the site.

### Background

The Riverstone East Precinct is approximately 659 ha and is located within the eastern portion of the North West Growth Centre. A significant part of Riverstone East Precinct falls within a defined catchment called the Visual Heritage Curtilage of one of Australia's most significant historical rural homesteads, Rouse Hill House and the surrounding Rouse Hill Regional Park. The heritage curtilage was developed to protect the existing cultural landscape which forms the historic context to the regional Estate.

### Rouse Hill House

Rouse Hill Estate is located on one of the highest ridge lines in the area. The house enjoys expansive views of the surrounding landscape which is typified by low rolling hills dotted with remnant native woodland mainly on the ridge lines and shallow valleys predominately cleared of vegetation for rural and pastoral use. Distant views offer up glimpses of the lower Blue Mountains to the west, the Hornsby Plateau to the north and filtered views east towards the coast. Seen from afar the homestead is visually identified by the landmark planting of *Araucaria cunninghamii* (Hoop Pine) surrounding the house.

The cultural landscape of Riverstone East has developed as a rural landscape over the past 200 years with constantly evolving pastoral practices and declining Cumberland Plain Woodland.

The remnant cultural landscape acts as an important reminder of our historic land use practices and the importance of farming as an economic enterprise in the history of Sydney.

### Areas of visual sensitivity

This study identifies and describes the sensitivity of the landscape from a selection of vantage points or viewpoints within Riverstone East. Areas classified with having high to very high levels of sensitivity will require innovative measures to help mitigate the effect of future development on culturally and environmentally significant areas. Less sensitive areas would be able to be developed while following strict planning controls and guidelines

### Woodlands and topography

The Cumberland Plain and Alluvial Woodland vegetation communities occur within some significant locations within the Precinct and provide effective landscape and visual buffers to sensitive areas and help provide the landscape character of the site. All efforts should be taken to retain and strengthen the woodland character of the site as it will assist in mitigating the effects of future development in and around the RHHE and from external views into the Precinct.

### Protecting the ridge line landscape

The most significant tracts of woodland vegetation are found along and surrounding the two major ridge line that dissect the site. This tall woodland currently provides a visual buffer to the RHHE and helps to define the rural character of the Estate. To ensure that the rural context is retained the woodlands located along the ridge lines are recommended to be retained and where circumstances permit, further enhanced.



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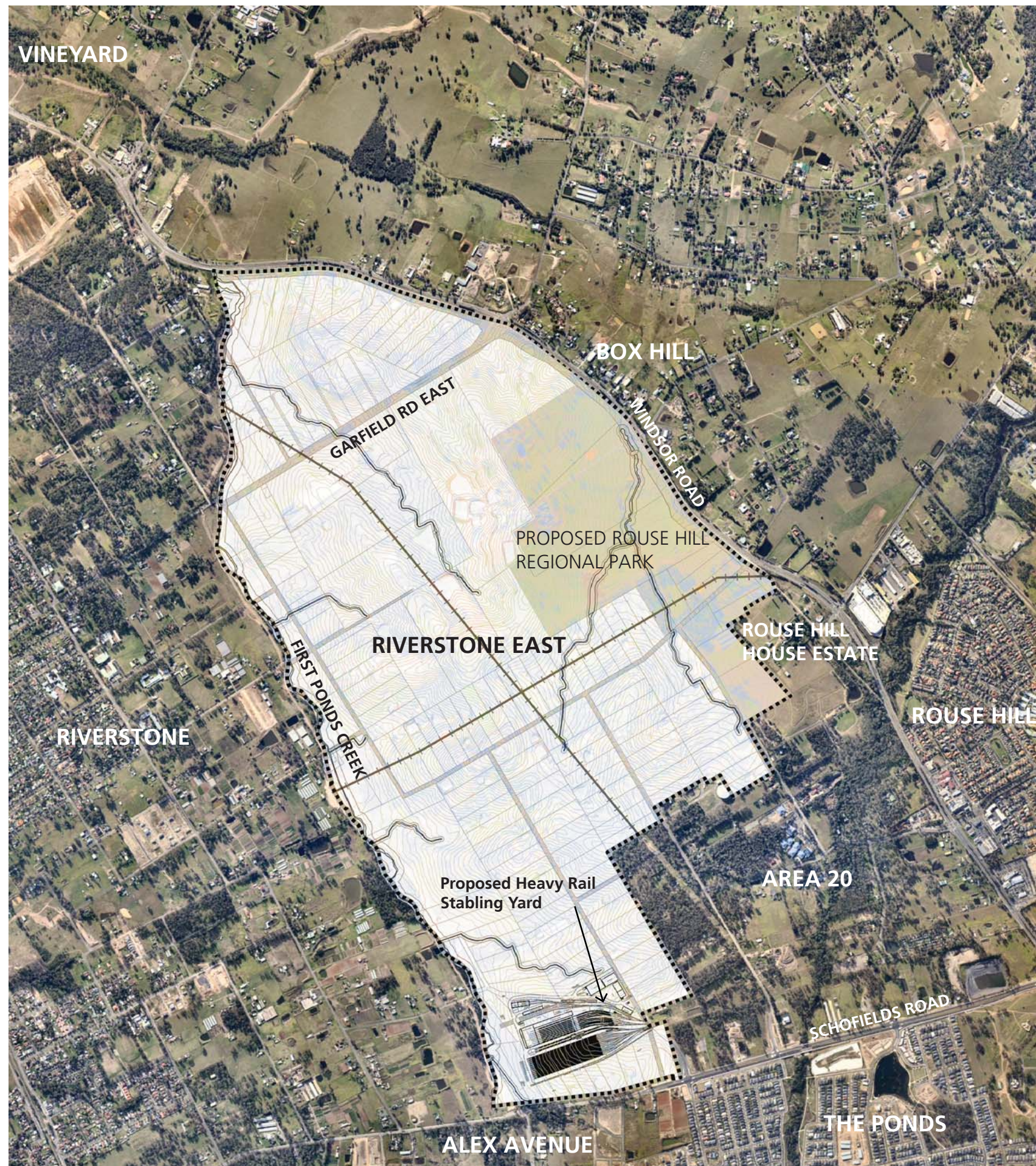
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## LEGEND

■■■■■■ Vineyard Precinct Boundary





## 1.0 Introduction:

(Refer to Figure 1)

The Riverstone East Precinct is one of a number of planned land release areas within the larger North West Growth Centre. The Precinct is located approximately 40 km to the north west of the Sydney CBD and is surrounded by the suburbs of Riverstone to the west and south west, Vineyard to the north west, Box Hill to the north and north east, Area 20/Rouse Hill to the east, south east, Alex Avenue to the south and Schofields to the south west. Riverstone East lies within the Blacktown Local Government Area (LGA).

The Riverstone East Precinct is approximately 659 ha and is located within the eastern portion of the North West Growth Centre. Once fully developed the Precinct is expected to house in the order of 5,300 dwellings for approximately 15,000 future residents. There is potential for this to increase to approximately 5,600 dwellings.

One of the Precinct planning process objectives is to develop a Indicative Layout Plan (ILP) which is to be informed by various specialist studies including this Landscape and Visual Analysis report. This report will provide the master planners of the ILP with a visual analysis of the site and provide a series of recommendations for the protection of the Precinct's visual, environmental, and cultural landscape.

## 1.1 Purpose of this Report:

PLACE Design Group has been commissioned to provide a visual and landscape analysis of the Riverstone East Precinct. The aim of the study is to assist with the identification and assessment of the visual and landscape qualities of the Precinct. This study is important in order to identify the environmental and cultural landscape character of the Precinct so as to better understand and preserve these qualities during the planning process. Future development is required to consider the local and regional impact of development upon the perceived landscape character of the Precinct.

The visual analysis describes the scenic qualities of the Precinct which is then used to determine the visual effect, sensitivities and potential impact of any future development on the current landscape setting.

## 1.2 Visual & Landscape Analysis Objectives:

In accordance with the project brief provided by the Department of Planning and Environment, the objectives of the visual and landscape analysis are:

- To identify and assess the visual and landscape qualities of Riverstone East;
- To ensure that the potential development of the land adequately takes into consideration the local and regional impacts of any development;
- To ensure that any planning for future development considers the visual impact of the development on the culturally sensitive Rouse Hill House Estate and its surrounding curtilage;
- To identify various areas within the Precinct that would be suitable for various types of development including housing, higher density dwellings, village centres and public open space from a scenic, cultural and landscape perspective;
- To provide clear set of guidelines with recommendations for the urban development of the Riverstone East Precinct.

## 1.3 Methodology:

The study identifies the scenic qualities of the site. Views, both to and from the site, are evaluated with special consideration given to the impacts of views from the Rouse Hill House Estate. Significant view corridors, vantage points within the site and their potential impacts are identified. Based on these findings and related visual analysis of Riverstone East, development and design recommendations are provided to guide the development through visually sensitive areas. The methodology of the study is given below with a chapter by chapter description of the reports structure and approach:

### Chapter 1 - Introduction

This chapter provides a summary of the background information to the report including work methodology and the structure of the document.

### Chapter 2 - Analysis

This chapter summarises the regional and local context, visual and landscape analysis that defines the landscape character of the Precinct and sub precinct's within the study area. This information is obtained through site inspections, photographic assessments, research into existing studies and from technical studies commissioned by the Department of Planning and Environment. Topography, site character, landscape features, ecology, heritage and other contributing factors inform the visual and landscape character assessment in this report.

### Chapter 3 - Visual Analysis

This chapter provides the important visual assessment of views and vantage points as identified in the previous chapter. Visual sensitivity, based on the natural features of the landscape and their visual qualities from certain vantage points are described in this chapter.

The visual impact is analysed in relation to the visual sensitivity and visual effect. The method is a qualitative approach and is detailed in Chapter 3.

In summary:

- The first step is to analyse the visual sensitivity and visual effect. Visual sensitivity refers to the character of a viewpoint. Visual effect is the relationship between the location and the proximity of the viewpoint. This step involves the analysis of the level of visual sensitivity and the visual effect from the important viewpoints identified with some consideration given to the views from Rouse Hill House Estate.
- The second step is to identify the important viewpoints from which the landscape character is analysed.
- Finally, the last step is to analyse the potential visual impact. This include rating the visual sensitivity and visual effects from levels of 'Nil' to 'Very High.'

### Chapter 4 - Opportunities and Constraints

Chapter 4 reviews the Government's intention to develop this Precinct for additional housing. It also summarises the opportunities and constraints of the development site based around flood zone protection, woodland protection and visual mitigation methods.

### Chapter 5 - Objectives

This chapter provides objectives and strategies to support the visual mitigation methods.

### Chapter 6 - Conclusion

This chapter concludes that sensitive and sustainable development is required for the Riverstone East Precinct for the benefit of the immediate and future generations.





## 1.4 Statutory Requirements:

The following are some of the main statutory instruments that are used to reflect the long term planning strategies at State and Local levels. These instruments provide the statutory basis for managing all future development within Riverstone East Precinct.

### **State:**

***Environmental Planning & Assessment Act 1979 (EP&A Act)***

***Sydney Region Growth Centres Environmental Planning Policy or (Growth Centres SEPP) 2006***

***Growth Centres Development Code 2006***

***Threatened Species Conservation Act 1995 (TSC Act)***

### **Local:**

***Blacktown Local Environmental Plan 1988***

## 1.5 Biodiversity Conservation Assessment:

Of most significance to this visual and landscape analysis report is biodiversity certification order put in place by the Minister of the Environment under s.126G of the TSC Act.

The biodiversity report prepared by Eco Logical Australia, April 2014 outlines the impact of the certification order in the growth centres as follows:

Biodiversity certification negates the requirement for impact assessment on threatened species under s.5A of the EP&A Act thus turning off the requirements for assessments of significance (i.e. seven part tests) or species impact statements on all certified land within the North West and South West Growth Centres.

The (Draft) Growth Centres Conservation Plan 2007 assessed native vegetation across the entire Growth Centres area and identified areas of Existing Native Vegetation (ENV). Figure 2 below shows the area of mapped ENV for the Riverstone East Precinct as well as the delineation of Certified and Non-Certified land.

The area of certified and non-certified land and the originally mapped ENV is shown in Figure 2. The Precinct contains 500 ha of certified land and 159 ha of non-certified land.

Under the certification order, Condition 12 and Condition 18 also apply to the Riverstone East Precinct. Condition 12 identifies non-certified land where validated ENV must not be cleared unless it is in accordance with a plan of management or unless the clearance has been agreed to by OEH (referred to in the order as the former Department of Environment and Climate Change, DECC). The land to which this condition applies comprises the Rouse Hill Regional Park. As a result, ENV cannot be cleared within this part of the Precinct unless it is in accordance with the requirements of Conditions 12. The area within the Precinct to which this Condition applies is shown in Figure 2.

## 1.6 Rouse Hill House Estate

The other important element to the visual and landscape assessment is the close proximity of historic Rouse Hill House Estate to the adjoining Area 20 Precinct to the north.

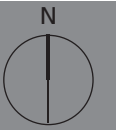
The statutory requirements calls for the preservation and protection of the state significant historic, cultural and scenic landscape qualities of the Rouse Hill House Estate (RHHE). In order to protect this historically significant assets from inappropriate development within the surrounding Precinct's, curtilages have been identified around the RHHE and include:

- Cultural landscape Conservation Zone (Burton, 1985);
- Visual Catchment (Harrison, 1990);
- Expanded Heritage Curtilage (Conybeare Morrison, 2003)






These curtilages although important have no statutory status. However, the cultural significance of the RHHE and Rouse Hill Regional Park requires that all development consider and address the heritage and rural setting and minimise the visual impact on the site.







## LEGEND

- Vineyard Precinct Boundary
-  Existing native vegetation (ENV) in Certified Lands (As per Eco Logical Australia Biodiversity and Riparian Corridors Assessment April, 2014)
-  Non-Certified Lands (ENV falls under Condition 12 of the Biodiversity Certification Order which identifies non-certified land where validated ENV must not be cleared without consent of the OEH)
-  Extent of Native Woodland Re-vegetation to proposed RHRP extension
-  Existing Transmission Easement
-  Existing creek lines & water courses with Riparian Corridor





## 2.0 Analysis

### 2.1 Regional Context

(Refer Figure 1)

To assist in determining the over arching visual and landscape impacts of future development within the Riverstone East Precinct it is important that we have a greater understanding of the regional context and the surrounding physical and climatic environment.

For this report the broader physical and climatic context incorporates the following adjoining suburbs:

The Ponds to the south  
Rouse Hill to the south east  
Box Hill to the north east  
Vineyard to the north and  
Riverstone to the west

#### 2.1.1 Location

(Refer Figure 1)

Riverstone east presides in the most northern reaches of the Blacktown LGA and can be classified as being situated in the start of the rural fringes of Sydney's greater metropolitan area. The Riverstone East Precinct is approximately 659 ha and is also located within the eastern portion of the North West Growth Centre.

The area over the years has been typified by the predominance of rural farmland and scattered tracts of native Cumberland Plain Woodland. In more recent years the Precinct has become more surrounded by an increase of residential subdivisions as part of the North West Growth Centre initiative.

However, the historical notion of the rural setting is quickly being eroded as the surrounding lands are developed primarily for residential use in order to keep up with the demand of an ever increasing Sydney population.

Recent developments and growth within centres such as Rouse Hill and the Ponds is now becoming the norm within the district to accommodate the demand for housing and local town centres.

Future developments either under construction or planning include Area 20 to the immediate south east, Alex Avenue to the south, Riverstone to the west, Box Hill to the north east and Vineyard to the north.

#### 2.1.2 Climate

The north west of Sydney within which the Riverstone East Precinct presides is generally drier and warmer than that experienced on the coast. Slightly higher temperatures with less humidity are a result of reduced air movement and lack of cooling sea breezes as felt on Sydney's east.

Historical accounts of the local conditions, as stated by Burton, 1985, recall that the endemic removal of large tracts of the native vegetation for rural pursuits has significantly contributed to an altered microclimate, and as such, has resulted in a higher incidence of frost, less precipitation, increased evaporation and greater exposure to hot winds and solar radiation.

Mean temperature ranges between 28 and 17 degrees in summer and 18 and 6 degrees in winter.

Mean precipitation ranges between 110mm in summer and 40mm in winter.

#### 2.1.3 Soil

(Refer Figure 3)

As with most of western Sydney the geological formation of the underlying soil profile for Riverstone East is that of the

Wianamatta Group Shales. The lower lying areas of the site mainly consist of Ashfield shales while the ridge lines are composed mainly of Bringelly Shales.

Harrison, 1990 states that the soils mainly consisting of heavily textured red podzolic soils, can be found on the upper and mid slopes and yellow podzolic soils lie within the lower slopes and drainage channels. There is no distinct difference between the shale groups in terms of erodibility and the ability to support the dominant vegetation of the Cumberland Plain Woodland group.

#### 2.1.4 Water courses

(Refer Figure 4)

The Riverstone East Precinct lies within the South Creek and Cattai-Creek sub catchments of the broader Hawkesbury-Nepean Catchment (Eco Logical, 2014),

The Riverstone East Precinct contains sections of the First Ponds Creek, a portion of its flood plain and a series of connecting tributaries. A number of small unnamed watercourses from within the site drain to the north to Windsor Road and then on to form part of the Killarney Chain of Ponds Creek. This creek then flows on to the Hawkesbury-Nepean River (Eco Logical, 2014),

#### 2.1.5 Heritage

(Refer Figure 1)

The following is an extract from Conybreare Morrison AREA 20 Landscape and Visual Analysis Report 2010.

Rouse Hill House Estate (RHHE) with its out buildings, associated farm structures, gardens and the Rouse Hill Primary School is one of the most significant heritage sites in Australia (Godden Mackay Logan, 2009).

After a series of subdivisions of the estates lands in the 1950's the NSW Government applied heritage conservation status to protect the remaining estate lands in 1983.

The first extensive clearing of the land for farming occurred in 1818 and much of the patterns of vegetation and built form which exist today were established between 1874 and 1931. The subdivision of the surrounding land caused significant changes to the rural landscape character.

Views from the estate to the south east and east, were originally of cleared pastures in the immediate vicinity. Over time the views have changed with regrowth of the woodland occurring around the creeks and ridge lines.

Generally, all visible elements within the immediate surrounds of the Estate have either been altered or are built upon and thus can be considered as the cultural landscape (Harrison, 1990)

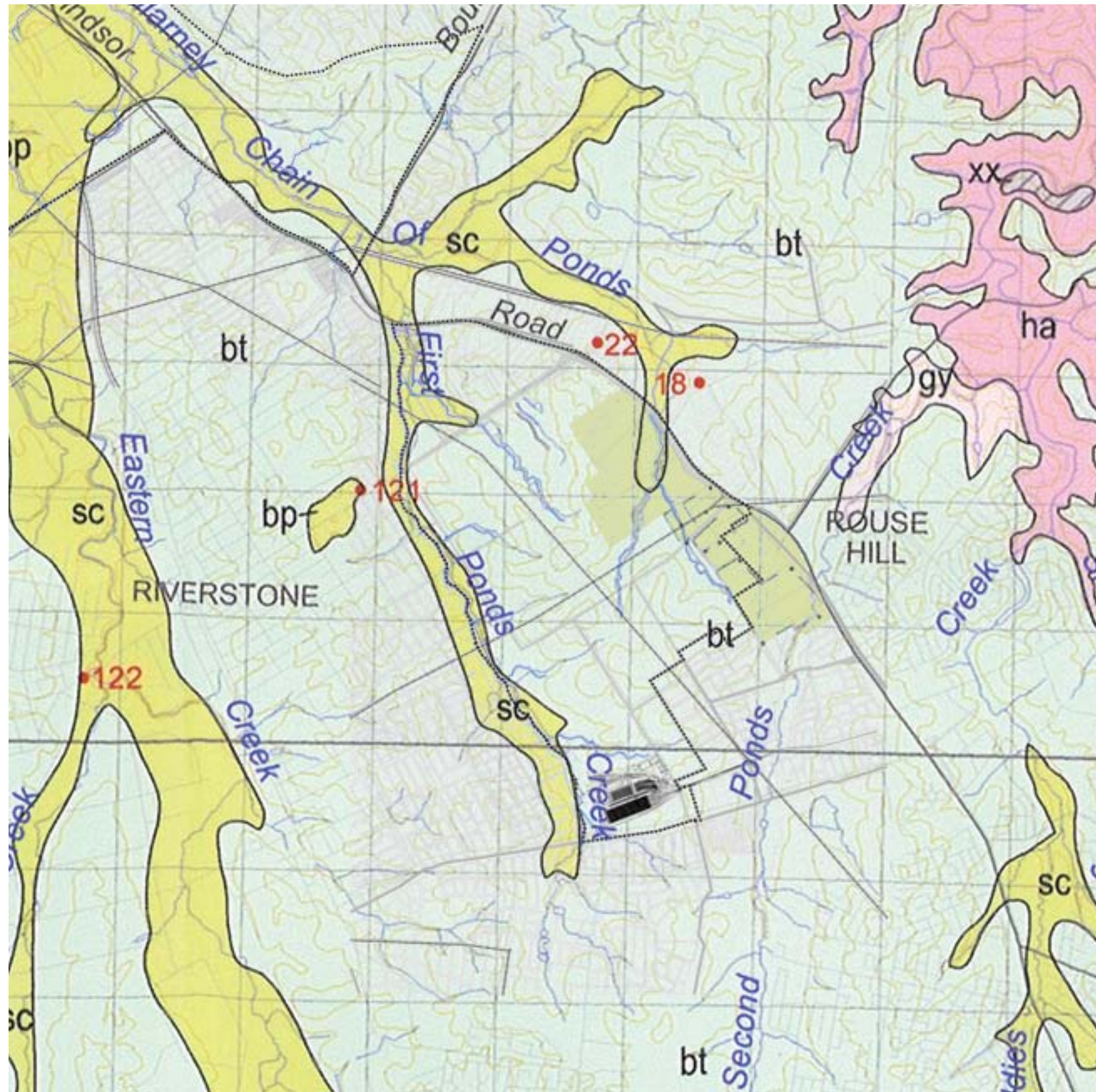
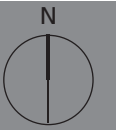
Other historic homesteads throughout the area have similar landmark features, creating a dialogue in the cultural landscape. The ridge line location of the homestead provides commanding views of the surrounding open pastures, wooded ridge lines, the lower Blue Mountains and distant glimpses towards the coast.

The cultural landscape of Riverstone East has developed as a typical rural setting over the past 150 years with constantly evolving pastoral and native woodland.

Harrison 1990, identified the need for a visual catchment to preserve the heritage value of the RHHE. The visual catchment is defined by the prominent ridge lines and valleys and helps to determine the extent of the landscape setting required to enhance the heritage value of the Estate.







## LEGEND

**bt** Blacktown Group -  
Soils - shallow to moderately deep.  
Red & Brown Podzolic Soils on crests  
and slopes.

Yellow Podzolic Soils on lower slopes  
and drainage lines and slopes.

Limitations - moderately reactive  
highly plastic sub soil, low soil fertility  
& poor sub soil drainage

**SC** South Creek Group -  
Soils - flood plains, valley flats &  
drainage channels of the Cumberland  
Plain. Very deep layered sediments.

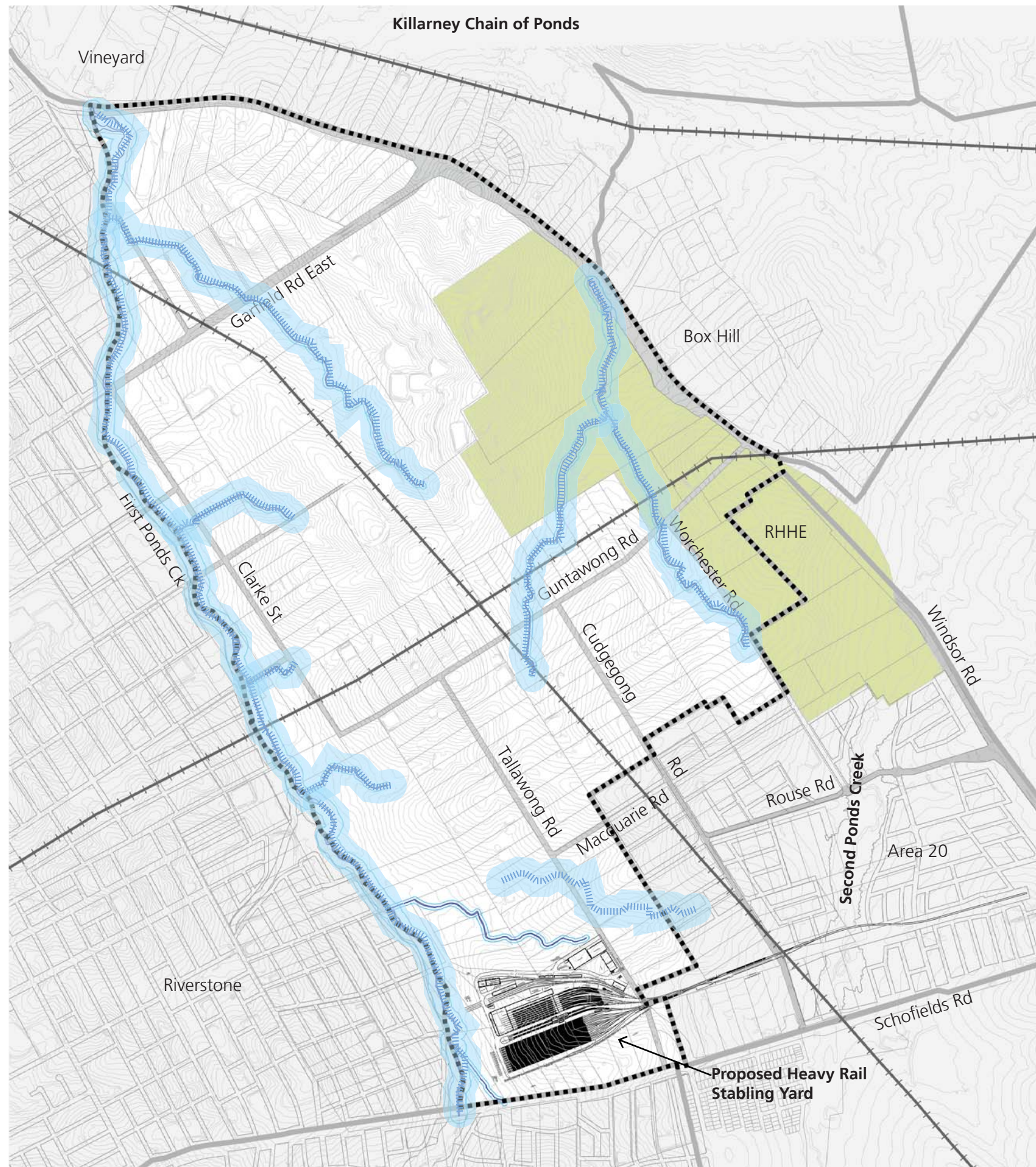
Red & yellow Podzolic Soils are most  
common.

Limitations - erosion hazard, dispers-  
ible and impermeable subsoils

Source: Soil Landscapes of the Penrith  
1:100 000 Sheet Report, 1989.  
(Pam Hazelton, Sue Bannerman &  
Peter Tille)

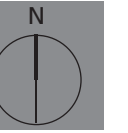






## LEGEND

- Vineyard Precinct Boundary
- ||||| Creek Lines & Gullies
- 20, 40 & 60m wide Riparian Corridors
- Existing Transmission Easement





## 2.2 Local Context

(Refer Figure 1)

This section of the report analyses the landscape character of the Precinct which helps to enhance the cultural aspects of the area and includes references to the heritage significance of Rouse Hill House Estate. Important views and vistas are analysed from the estate and from several other important locations with the boundary of the Riverstone East Precinct.

### 2.2.1 Riverstone East

(Refer Figure 1)

The north east of the Precinct is bound by Windsor Rd while the western boundary is defined by First Ponds Creek. First Ponds Creek forms the physical boundary between Riverstone and the current study area. The south east boundary of the Precinct is demarcated by Schofields Rd.

Within the adjoining Area 20 Precinct to the south east lies the Rouse Hill House Estate and the current boundary of the Rouse Hill Regional Park (RHRP). RHHE occupies around 12 ha with the RHRP occupying an additional 42ha. The proposed extension of the RHRP into the Riverstone East Precinct could potentially occupy up to the vicinity of 141ha.

The study area currently consists of small rural holdings that are made up primarily of rural or environmental residential living and farming lands that include poultry, market gardens, nurseries and flower production. There is also a large meat rendering works site located within the middle of the site and situated on a small ridge line overlooking pastoral grounds.

As a result of this activity much of the site has been cleared with much of the remnant vegetation located along the ridge lines nearer the southern and central portion of the site. Much of the vegetation is relatively young and disturbed with significant exotic and weed encroachment into the understorey. However, there are areas of significant good quality remnant vegetation communities within fragmented parts of the site (Eco Logical, 2014).

First Ponds Creek and a portion of its flood plain is within moderate condition and has been largely modified due to the surrounding farming practices. The remnant Alluvial woodland vegetation has been largely degraded with up to 50% of the forest having been removed. (Eco Logical, 2014).

### 2.2.2 Topography

(Refer Figure 5)

*(Refer to Figure 9 to 12 Cross Sections)*

The topography of the Riverstone East Precinct is dominated by one major ridge line, a minor ridge line and a series of low rolling hills that stem from the ridge lines. A series of shallow valleys that have been formed by small water courses run predominately north west to south west from the ridge lines. First Ponds Creek is a larger system and runs south east to north west and forms the southern boundary of the Precinct.

The major ridge line runs from Rouse Hill House Estate in the north east down to Cudgegong Rd in the south, south west.

The major ridge line then slopes gently down to the south towards Schofields Rd and west towards First Pond Creek. It also slopes eastwards down into Second Ponds Creek within the neighboring Area 20 Precinct as well as northwards into the catchment of the proposed extension of the Rouse Hill Regional Park.

The minor ridge line bisects the Precinct by running south to north with gently sloping sides that extend out towards the east and also to the west down towards First Ponds Creek.

A shallow valley has formed between the two main ridge lines to the north east and currently contains a small water course that is fragmented by farm dams and is mostly pastoral in its character with large open grasslands and very scattered pockets of trees.

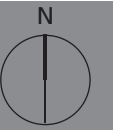
A larger shallow creek line called First Ponds Creek has formed to the west of the minor ridge line. This creek is fed by some very disturbed minor tributaries and is mainly characterised by local farms and fragmented Alluvial Woodland.

The highest point of the Precinct's ridge lines reach an elevation of approximately 74m while the lowest point being approximately 22m above sea level and is contained within a minor flood zone.

Figures 9 to 12 show cross sections taken through out the Precinct to assist in understanding the topography and to provide valuable insights into the visual and landscape analysis that have assisted in developing the objectives to help visually mitigate future development within the Riverstone East Precinct.

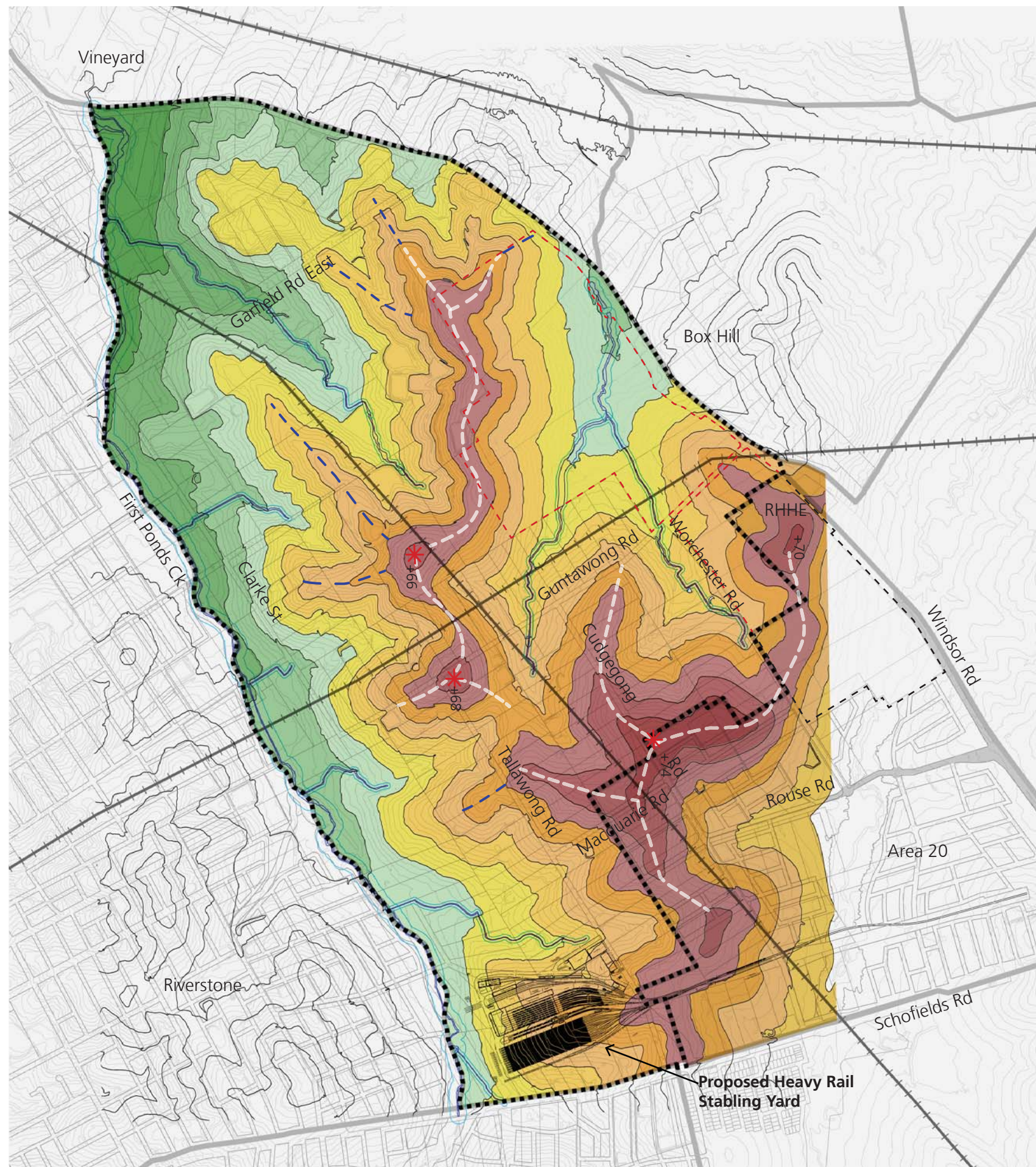




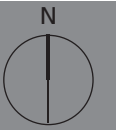


## LEGEND

- Vineyard Precinct Boundary
- 20 to 25m
- 25 to 30m
- 30 to 35m
- 35 to 40m
- 40 to 45m
- 45 to 50m
- 50 to 55m
- 55 to 60m
- 60 to 65m
- 65 to 70m
- 70 to 75m
- \* High Points
- High Ridgeline
- Low Ridgeline
- ||||| Existing Transmission Easement







## LEGEND



Vineyard Precinct Boundary



Land Use - Proposed Rouse Hill Regional Park  
Character - Rural / Pastoral  
Vegetation - Cumberland Plain Woodland  
Clearance rate - 95%



Land Use - Residential / Rural / Commercial  
Character - Rural Estate Lots  
Vegetation - Cumberland Plain Woodland  
Clearance rate - 75-90%



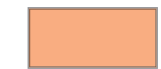
Land Use - Residential / Rural / Commercial  
Character - Open grassland / Farmland  
Vegetation - Cumberland Plain Woodland  
Clearance rate - 80-90%



Land Use - Predominately Woodland  
Character - Woodland  
Vegetation - Cumberland Plain Woodland  
Clearance rate - 20-30%



Land Use - Commercial / Pastoral  
Character - Cleared pastoral farmland  
Vegetation - Cumberland Plain Woodland  
Clearance rate - >90%



Land Use - Rural / Commercial Farming  
Character - Rural Estate Lots / Farms  
Vegetation - Cumberland Plain Woodland  
Clearance rate - 60-80%



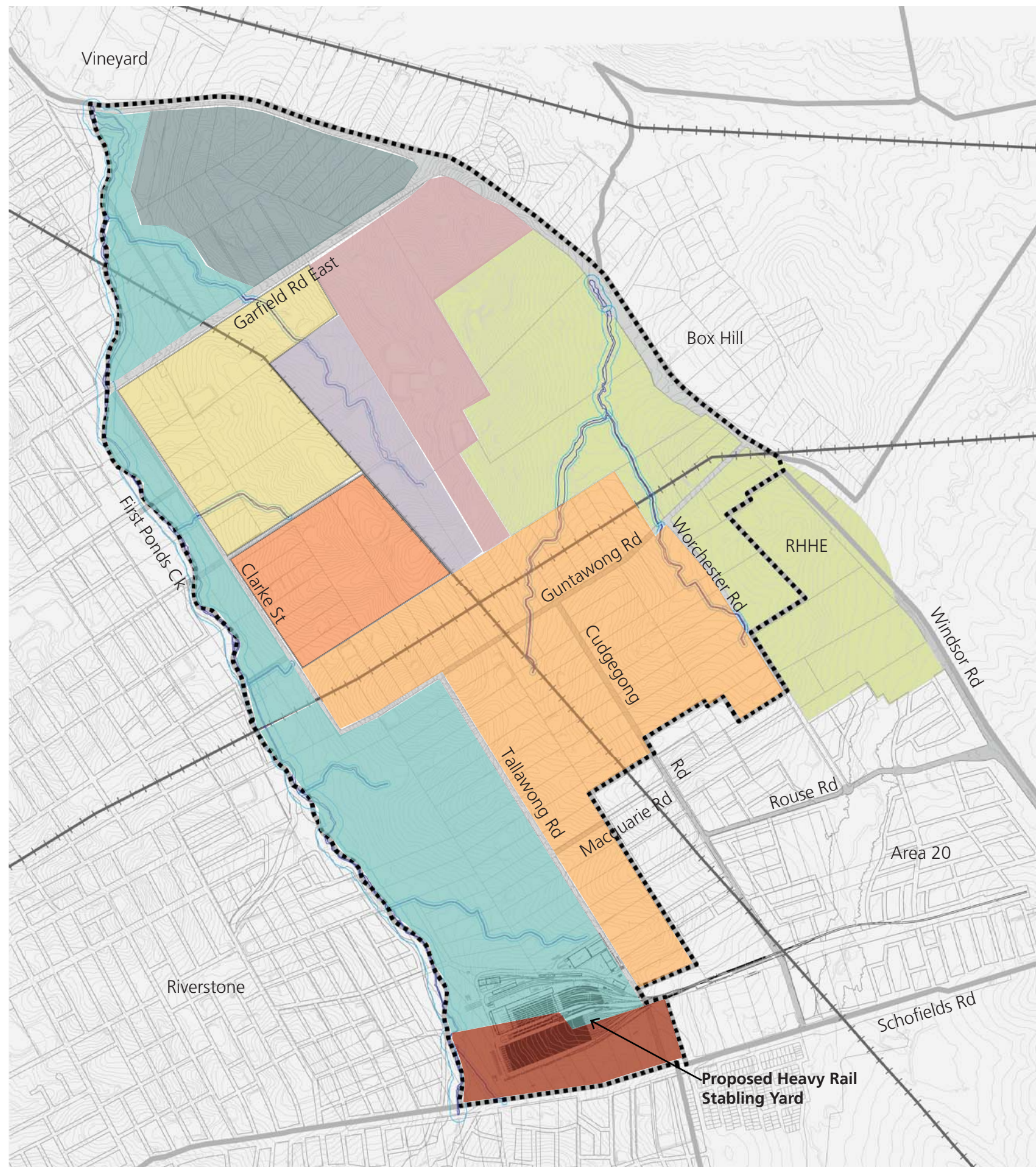
Land Use - Residential / Rural  
Character - Woodland / Environmental living  
Vegetation - Cumberland Plain Woodland  
Clearance rate - 50-80%



Land Use - Cleared lots  
Character - Empty lots / Devoid of character  
Vegetation - Nil  
Clearance rate - 100%



Land Use - Agriculture / Commercial  
Character - Farming / Creek line  
Vegetation - Cumberland Plain Woodland  
Clearance rate - 75-90%





### 2.2.3 Landscape Character Units (Refer Figure 5)

#### **General Landscape Character:** (Refer to Figure 6)

The landscape character of the Riverstone East Precinct is dominated by a main ridge line that runs from the Rouse Hill House Estate in the north east to Cudgegong Rd in the south west of the site. Smaller ridge line fingers extend from this ridge line to the north, north west and south.

A secondary ridge line bisects the Precinct by running approximately south to north.

The north east of the Precinct's is bound by Windsor Rd while the western boundary is defined by First Ponds Creek. The southern boundary of the Precinct is demarcated by Schofields Rd.

Large allotments of woodland environmental living within areas of dense native woodland vegetation, large extents of cleared pastoral lands along with mixed commercial and agricultural activities gives the Precinct a low density 'rural/farmland' character. Substantial pockets of remnant Cumberland Woodland add a sense of the bush to the dominant rural character.

This over arching character has been formed over time and in doing so, has resulted in a series of sub character units which have evolved a more distinctive landscape character within the Riverstone East Precinct and are described as follows:

#### **Proposed Rouse Hill Regional Park:** (Refer to Figure 6)

The area delineated for the proposed extension of the existing Rouse Hill Regional Park is characterised by open pastures within low rolling hills and a single main ridge line.

The pasture is dotted with very sporadic pockets of Cumberland Plain Woodland, a large local meat rendering works site business, farm dams and erosion control rills.

The expansive pasture land is also intersected by an indistinct Category 2 Riparian corridor that leads on to the Killarney Chain of Ponds to the north of the site.

It must be noted that the Office of Environment and Heritage plan to revegetate the proposed extension of the RHRP to create significant tracts of native vegetation on the minor ridge line and around the disturbed water course that runs to the north towards Windsor Rd and the Killarney Chain of Ponds. It is anticipated that over time this planting regime will have a significant impact on the distant views to the mountains to the north west currently enjoyed from the RHHE.

#### **Rural Estates:** (Refer to Figure 6)

These rural allotments are located to the north of the subject site on a low ridge that faces back to the south and south east over Garfield Rd East.

This open rural residential sub precinct character is one of cleared woodland vegetation with scattered trees. Open rural allotments and scattered vegetation roll down from the minor ridge to meet the low lands of First Ponds Creek.

Houses and some mixed use businesses dominate the interface with Windsor Rd and are partially screened with remnants of native woodland species and a mix of exotic species.

The larger rural lots behind these lots contain mainly large areas of turf and pasture grasses framed with dispersed tracts of Cumberland Plain Woodland which provides a significant backdrop to the largely open rural nature of this sub precinct.

#### **Open Grassland / Farms:** (Refer to Figure 6)

This sub precinct is defined to the north via Garfield Rd East and to the south west by Clarke Street and First Ponds Creek.

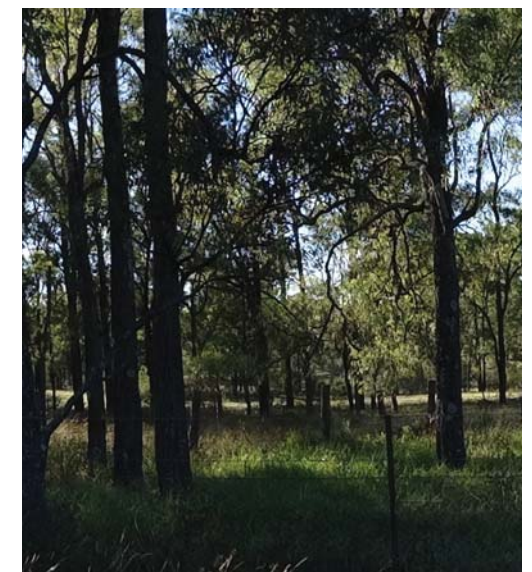
The character is provided mainly by large lots that have been mainly cleared of vegetation while leaving large open grassland paddocks that appear not to be utilised for pasture or farming lands.

The built form character is dominated by a large pallet crate industry and some large allotment rural homes. Behind these rural allotments lies a large area of the scattered remnants of the Cumberland Plain Woodland with little or no joined canopies.

#### **Woodland:** (Refer to Figure 6)

The woodland Precinct is characterised by the predominance of Cumberland Plain Woodland and open understory.

The woodland is bisected by a Category 2 riparian creek line which has been impeded with a large farm dam. There is no built forms within this Precinct.





**Cleared Pastoral Farmland:**  
(Refer to Figure 6)

To the north east of the Woodland sub precinct is an area that is dominated by a large meat rendering works site industry with several large farm or water usage dams and swales that have cleared the visual landscape of any real character.

The pasture lands surrounding the industry to the north and north east is located on a small ridge line and is dotted with very sporadic pockets of Cumberland Plain Woodland, smaller farm dams and erosion control rills. These elements provide this sub precinct with a very pastoral / farmland appearance.

It must be noted that the Office of Environment and Heritage plan to revegetate the proposed extension of the RHRP to the east of this location. The planting of significant tracts of native vegetation on the minor ridge line and lower slopes to the east will provide a natural landscape buffer to any future development that may occur to the north west of the minor ridge line and greatly assist to strengthen the rural / bush land character of the Precinct.

**Rural Estate Lots & Farms:**  
(Refer to Figure 6)

The middle part of the Precinct is predominately made up of commercial farming techniques that range from battery farms to nurseries and market gardens. This gives the sub precinct a distinct farming quality.

However, higher up along the low ridge line is a substantial stand of remnant Cumberland Plain Woodland that provides a vegetated back drop and helps frame the farming community sub precinct.

**Woodland / Environmental living:**  
(Refer to Figure 6)

The woodland environmental living sub precinct is characterised by dense Cumberland Plain Woodland across the major ridge line running from the Rouse Hill House Estate in the north east to south west of the Precinct.

The ridge line slopes gently down to the south towards Schofields Rd and west towards First Pond Creek. It also slopes eastwards down into Second Ponds Creek within the neighboring Area 20 Precinct as well as northwards into the catchment of the proposed extension of the Rouse Hill Regional Park.

Large single and double rural estate type housing are nestled into the dominant landscape of the existing woodland trees.

On the ridge line the woodland is bisected by a 30m easement for transmission lines allowing for a break in the canopies and for distant but linear views.

Although much of the ridge line is dominated by large lots containing remnant woodland, much of the woodland vegetation is contained within the adjoining Area 20 Precinct and the Cudgegong Reserve. This adjoining vegetation helps strengthen the over visual character of this sub precinct of Riverstone East

**Cleared Lots:**  
(Refer to Figure 6)

This character unit is most easily described as being devoid of any visual character or distinguishing features. This sub precinct is located to the extreme south of the Precinct and is bounded by Schofields Rd.

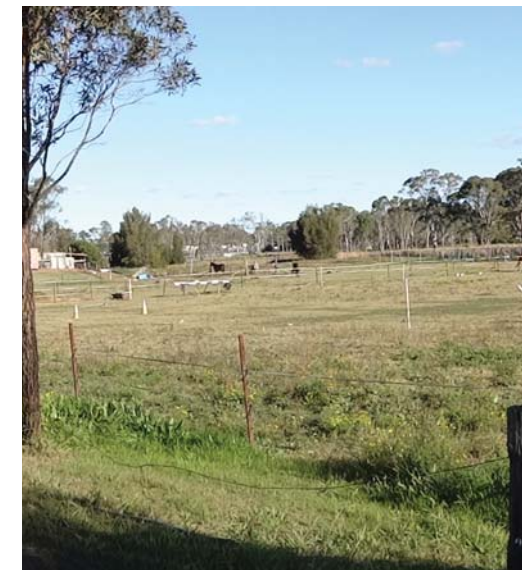
The large lots are cleared of all vegetation and only scattered grass cover remain. The lots appear to have been cleared in preparation for future heavy rail connection and stabling yards.

**Farming /Creek line:**  
(Refer to Figure 6)

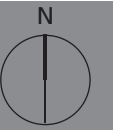
The Category 2 First Ponds Creek corridor bounds the Precinct for its entire length along its western border. The area is characterised mainly by its low lying topography and by the predominance of agriculture and market gardens.

Much of the remnant Alluvial Woodland has been removed for various forms of farming with only scattered, disconnected areas of the riparian corridor woodland remaining along its length.

Although fragmentation of vegetation has occurred along the creek line it is important for the future development of the Precinct that this riparian corridor is preserved and rehabilitated in order to improve biodiversity, hydrology and water quality of the creek.

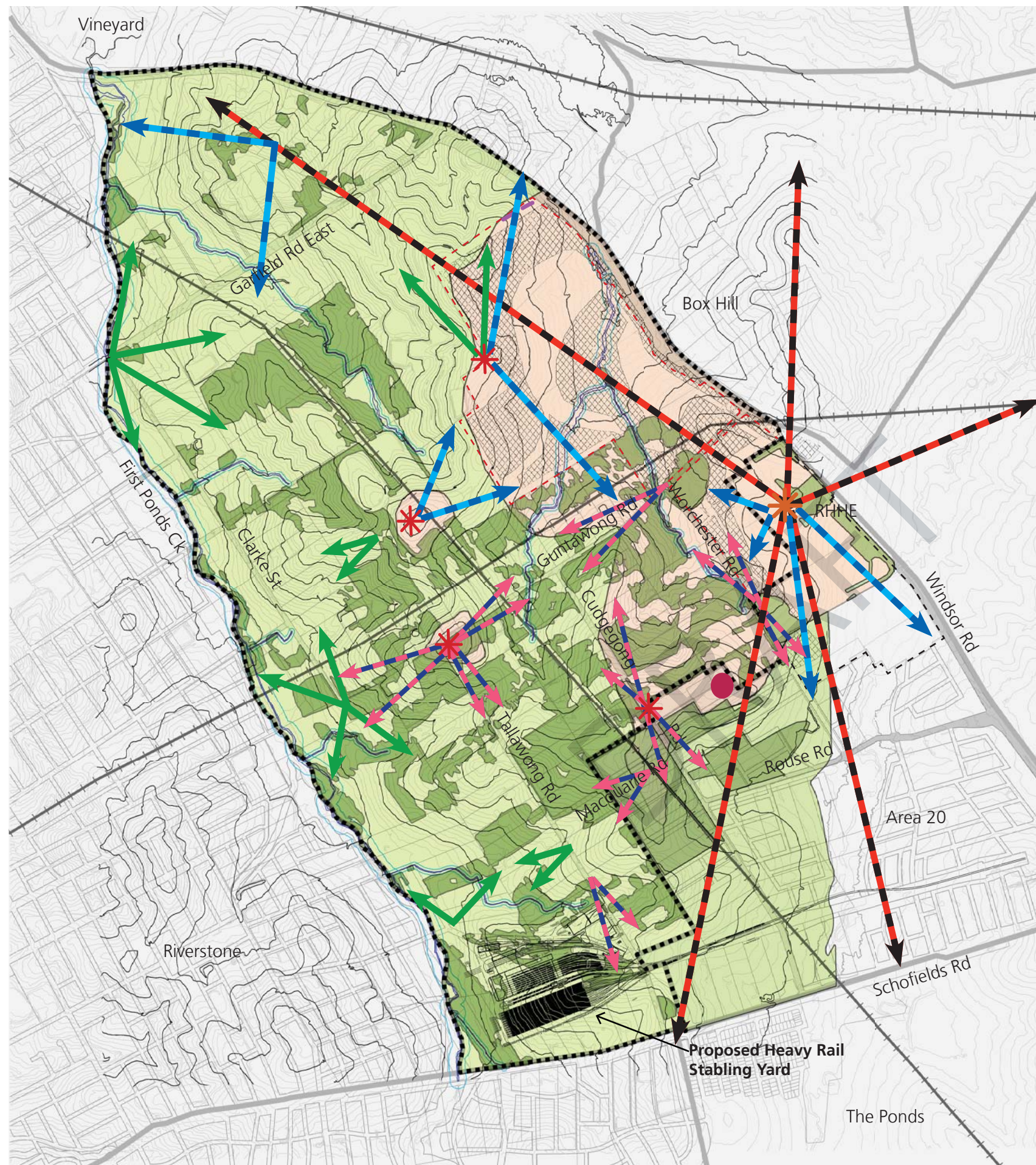






## LEGEND

- Vineyard Precinct Boundary
- Visually sensitive from Rouse Hill House Estate
- Not directly visible. (Either blocked by vegetation or ridge lines)
- Vegetation - ENV
- Extent of Native Woodland Re-vegetation to proposed RHRP extension
- Distant Views
- Immediate Views
- Middle Distance Views
- Framed Views
- High Points
- Rouse Hill House Estate (RHHE)
- Existing Water tower at hill top
- Existing Transmission Easement





## 2.2.4 Views

(Refer Figure 7)

### Views from Rouse Hill House Estate.

For the purpose of this study the views described below will generally fall within the direction of the Precinct boundary extending from the north to the south, south west to north east with views to the south east to east having been covered in previous reports.

Although not strictly within the study area, the cultural significance of the Estate on the surrounding landscape and the physical character it exudes, means it is the main focal point for any visual mitigation objectives for future development from within the Riverstone East Precinct.

Views from RHHE generally range from distant due to its hill top location and cleared paddocks, or middle views contained by the surrounding ridge lines and native vegetation.

The views to the north west provide the most expansive views. These views encapsulate the backdrop of the lower Blue Mountains with the rural pastoral grazing lands forming the middle foreground. Views to the north and north east, the Hornsby Plateau provides the distant background with the developments of Box Hill and Windsor Rd forming the foreground.

To the west the views to the lower Blue Mountains are fragmented and framed between pockets of native vegetation while views to the south west are obscured with ridge line vegetation blocking the distant views. It should be noted however, it is this line of native woodland vegetation that helps to define the middle ground and accentuates the rural landscape character of RHHE.

It must be noted that the Office of Environment and Heritage plan to revegetate the proposed extension of the RHRP to create significant tracts of native vegetation on the minor ridge line and around the disturbed water course that runs to the north towards Windsor Rd and the Killarney Chain of Ponds. It is anticipated that over time this planting regime will have a significant impact on the distant views to the mountains to the north west currently enjoyed from the RHHE.

### Distant Views.

From the major ridge line that runs from Rouse Hill House Estate in the north east to Cudgegong Rd in the south south west of the site there is a variety of view sheds available depending on your location. As discussed in the previous section on RHHE the views to the west, north and east are expansive due to the clearance of the vegetation and predominance of low lying pastoral grazing lands. However, the topographic high point located mid way along Cudgegong Rd only affords narrow internal views that are framed by the dense vegetation that dominates this portion of the ridge line.

Other significant views are to be found on the minor ridge line that bisects the site from south to north. The ridge looking east provides extensive views over the cleared pastoral grazing lands that will now form part of the extended Rouse Hill Regional Park to Box Hill and beyond. Views to the west and south west are dispersed and fragmented and are available depending on the density of the ridge line vegetation.

Distant views can also be derived from the hill top located to the north of Garfield Rd East. Distant views can be afforded when looking south west down towards the Precinct of Riverstone.

### Middle / Internal Views.

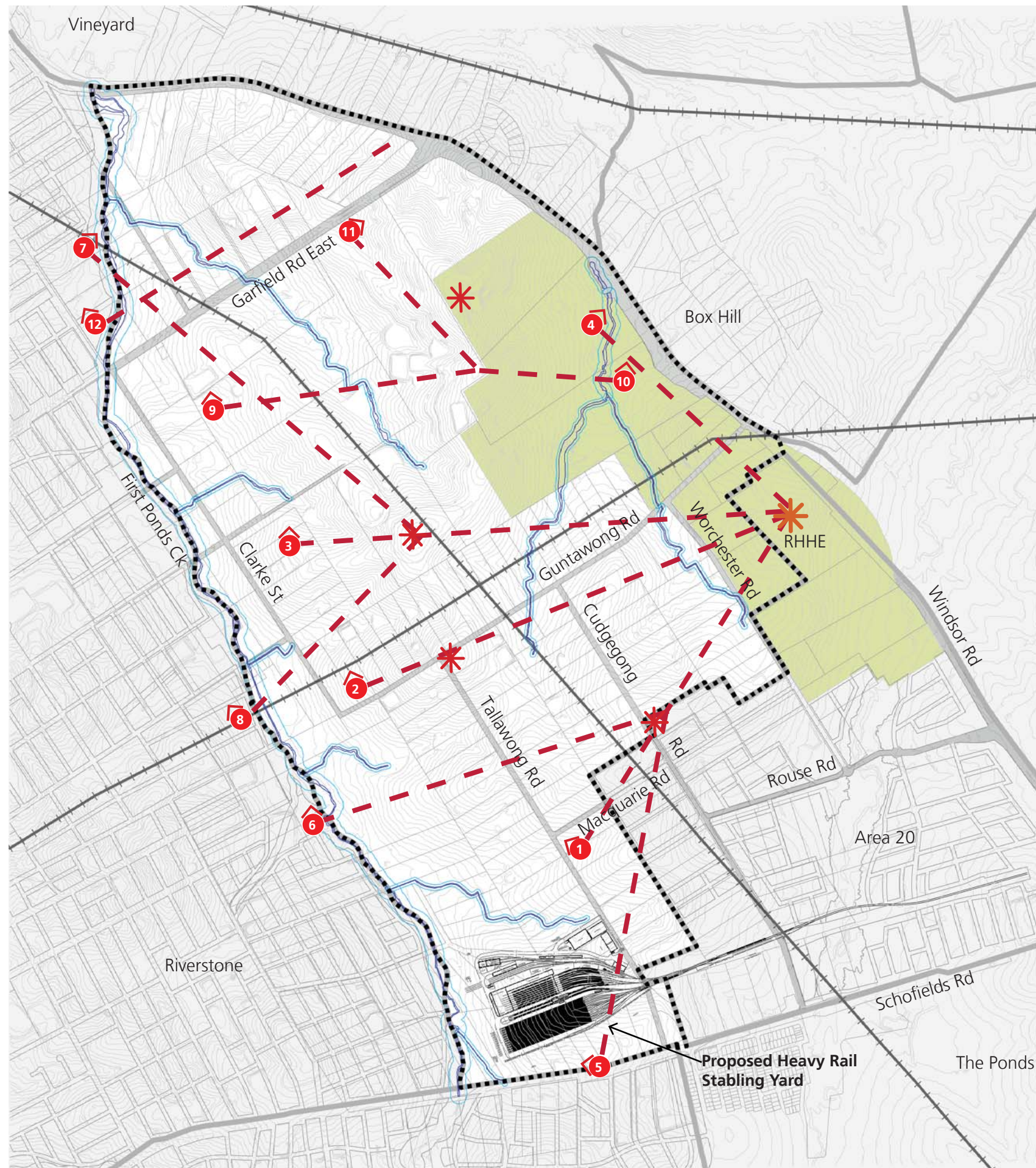
The topographic high point at 74m is located mid way along Cudgegong Rd. From this location only narrow internal views are afforded along roadways, easements and between rural lots as they are framed by the dense vegetation that dominates this portion of the ridge line. Internal views dominate the low lying areas of the site found to the southern and western areas of the Precinct beyond the ridge lines. Views from First Ponds Creek are mainly linear in nature and are a mix of open farm land or scattered alluvial woodland. Middle distance views up the gentle slopes to the ridge lines to the east and north east are often fragmented and restricted by the pockets woodland vegetation.

### Framed Views.

The local road network that cuts its way through the ridge line vegetation to the south and south east of the Precinct is generally bordered on both sides by either dense existing native vegetation or scattered woodland remnants within the rural allotments. The close proximity of this vegetation to the road side helps to frame the road, only allowing for very linear, narrow views of the road ahead.

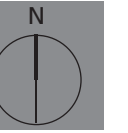




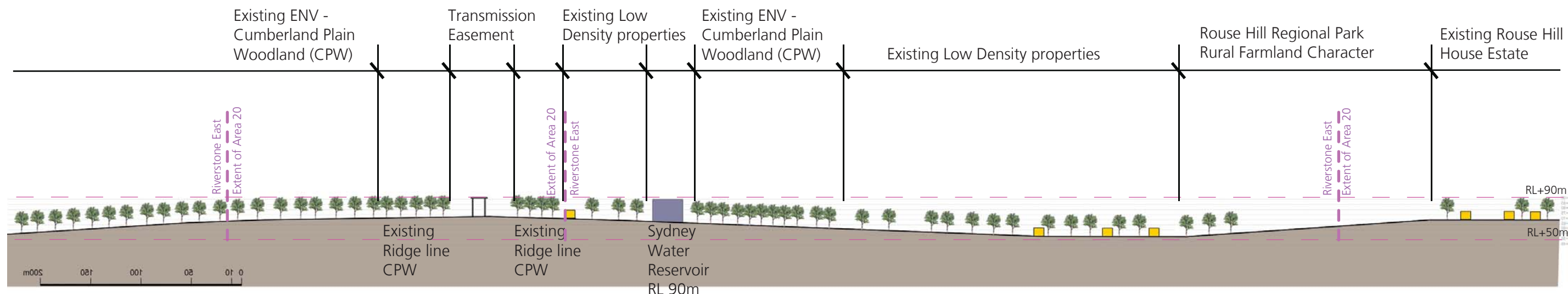


## LEGEND

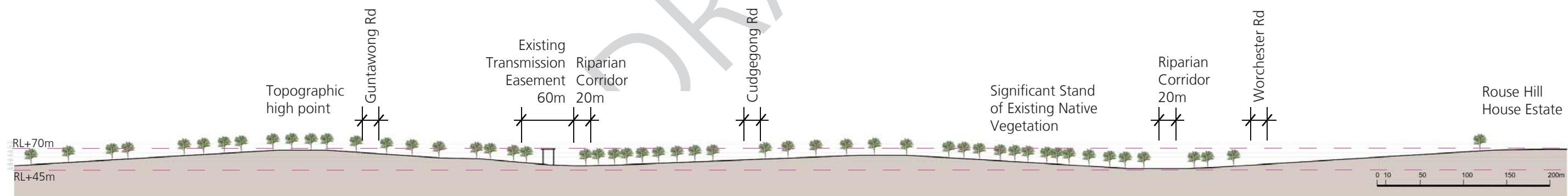
- Vineyard Precinct Boundary
- ① Section Number
- Section Line
- \* Rouse Hill House Estate (RHHE)
- \* Topographic High Point





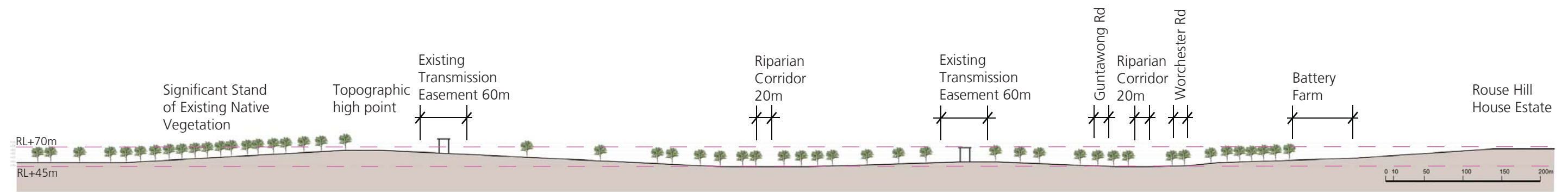


SECTION 1 - EXISTING CONDITION FROM ROUSE HILL HOUSE ESTATE TO AREA 20

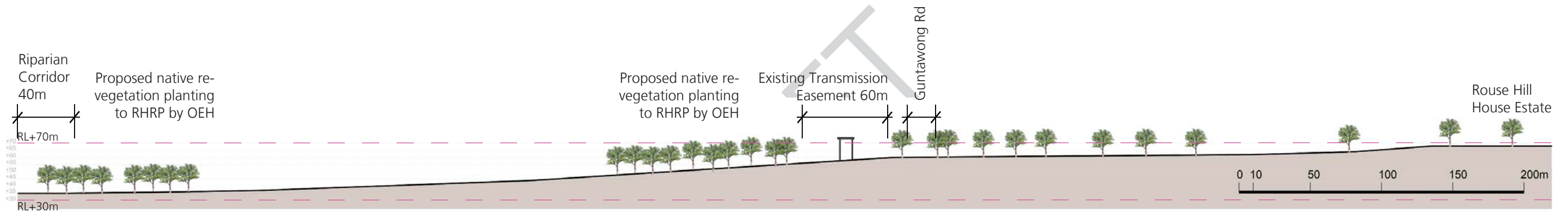


SECTION 2

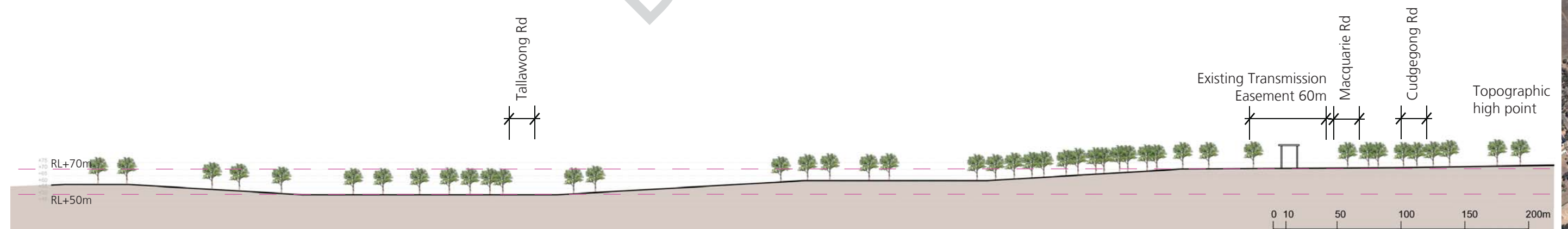




SECTION 3

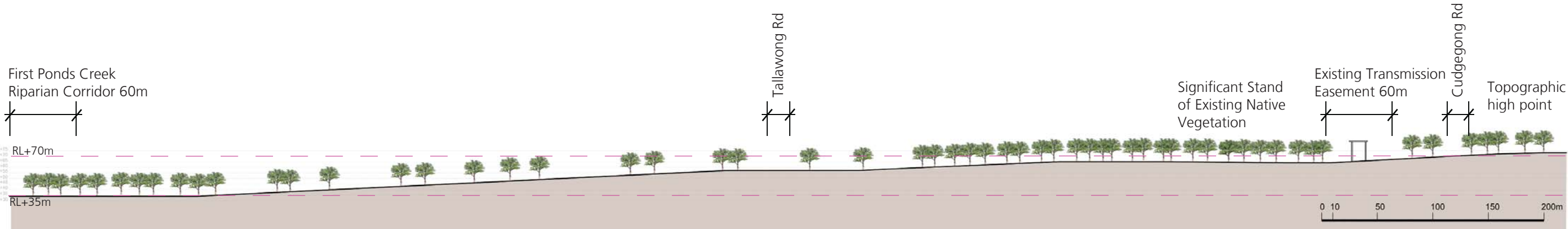


SECTION 4



SECTION 5





SECTION 6



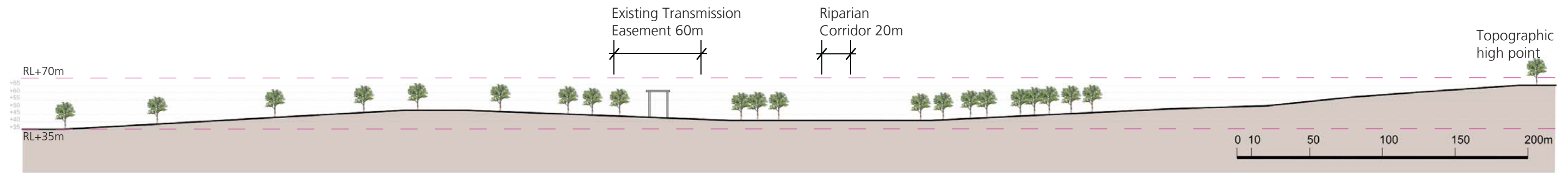
SECTION 7



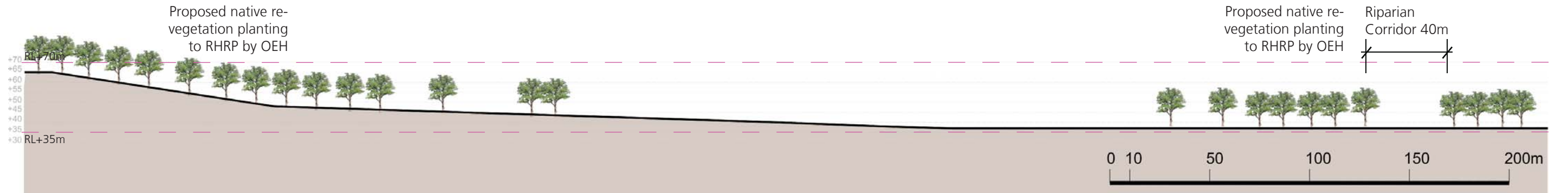
SECTION 8



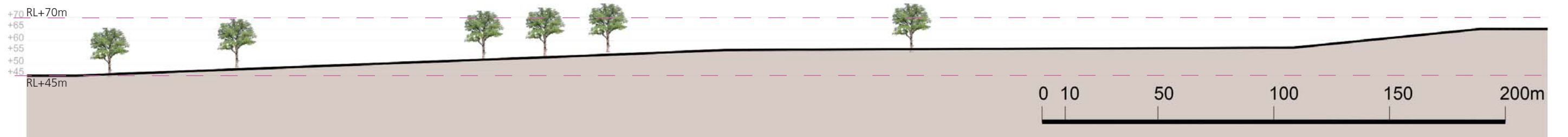




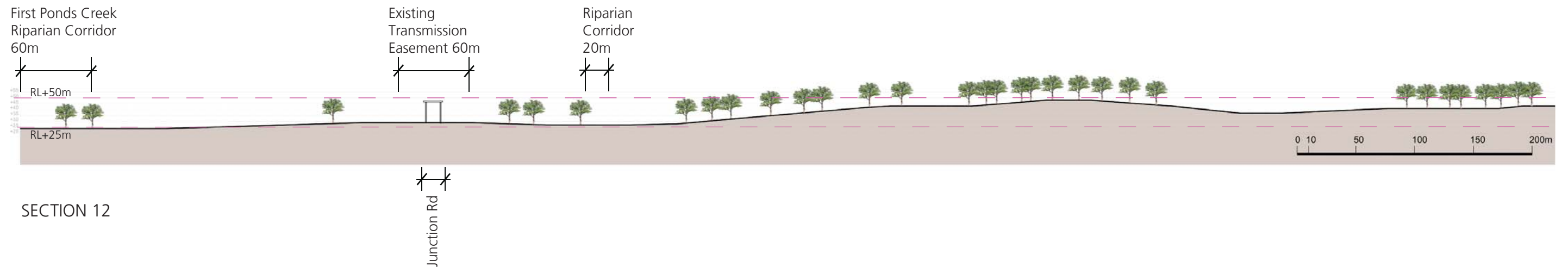
SECTION 9



SECTION 10



SECTION 11



SECTION 12





### 3.0 Visual Analysis Methodology

This Chapter provides the detailed visual analysis of the Riverstone East Precinct. This analysis is based on information from previous reports, technical studies of the Precinct, extensive site visits and observations. Due to the proximity of the historic and culturally sensitive Rouse Hill House Estate located to the east within Area 20, special consideration was given to the potential impacts of future development on existing views both into and from the RHHE.

#### 3.1 Methodology, Terminology and Process

For the purpose of this study the main method developing the visual analysis is to firstly identify the important vantage points from within the Precinct. These view locations are selected based on the potential for future development to affect sensitive areas within the site such as the RHHE, existing native vegetation, threatened or endangered vegetation communities, cultural significance and landscape character.

Following site visits, site analysis and desk top studies of previous reports, this report identified a series of significant vantage points or view points. From this we identified 16 important views that are representative of all the major character units discussed in section 2.2.3. These views were also selected based on the visual qualities of the topography, vegetation, hydrology, the cultural landscape and the surrounding areas.

Descriptions of the view points are generally categorised as having either distant, middle or immediate views and are defined as follows:

#### Distant Views.

Distant views are regional views and extend beyond the subject Precinct by over 5km.

#### Middle Views.

Middle views are within a radius of 1km from the view point and are generally within the study area.

#### Immediate Views.

Immediate views are internal views that are within close proximity to the view point.

The second method to developing the visual analytical data is an assessment of the visual sensitivity and the visual effect of future change from the specified viewpoints. This analysis also considers the potential for future development within the study area and its potential impact on the culturally sensitive area of the RHHE. Analysing the existing conditions is the key component of the visual analysis in order to maintain or preserve the rural character of the Precinct and its subsequent relationship with the heritage character of the RHHE. Through holistically looking at the visual sensitivity and visual effect we can better identify the potential for visual impacts on the study area from any given view point.

Visual sensitivity refers to the character of a viewpoint, and is a measure of a viewpoint's sensitivity to possible change. In the following viewpoint analysis tables there is a category titled 'Visual Sensitivity' which provides an analysis of the level of visual sensitivity and the reasoning for this rating. When determining the visual sensitivity of a view point the following factors should be considered:

- Existing conditions
- Regional context
- Visually significant locations
- Visibility from other locations
- Perception of the viewer; and
- Potential for future change.

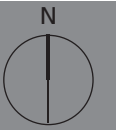
Once visual sensitivity has been established, the visual effect of potential future development upon each of the view points is then determined.

Visual effect is an expression of the visual relationship between the specific viewpoint location and its proximity to the surrounding existing visual environment or context. The visual effect is then expressed as a sliding scale rating from Nil to Very High with nil having no effect and Very High excluding any development without significant mitigation measures.




In the following viewpoint analysis tables there is a category titled 'Visual Effect' which provides an analysis of the level of visual effect and the reasoning for this rating.







## LEGEND

- Vineyard Precinct Boundary
-  Photo Location, number and view direction
-  Photo location
-  View direction at one photo location
- 01 Rouse Hill Estate
- 02 Guntawong Rd looking south west
- 03 Worchester Rd looking south east
- 04 Worchester Rd looking south east
- 05 Guntawong Rd looking northeast, south west & south east
- 06 First Ponds Creek looking south
- 07 Tallawong Rd looking north west & south east
- 08 Tallawong Rd looking south
- 09 Macquarie Rd looking north east
- 10 Transmission easement looking south east & north west
- 11 Cudgegong Rd looking south east
- 12 Clarke St looking west
- 13 Clarke St looking south
- 14 Private road looking south east & north west
- 15 Clarke St south east & north east
- 16 Junction Rd looking north east & south west

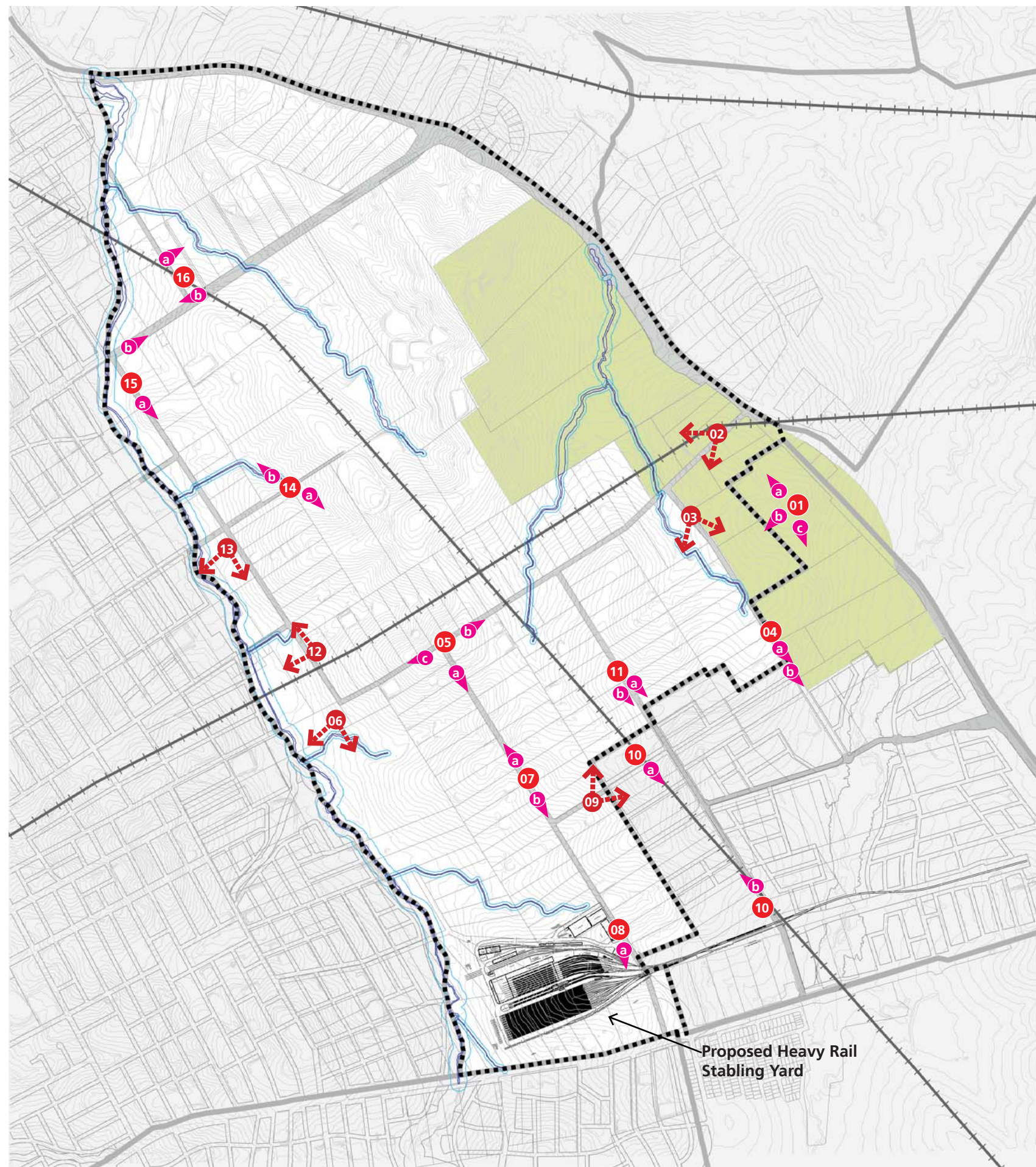




PHOTO LOCATION 1 - Rouse Hill House Estate



Photo No 1a: 4850

**Description of Views:**

Although outside of the Riverstone East Precinct views from photo location 1 are from RHHE due to its cultural and visual sensitivity and is one of the highest points in the area.

Photo 1a: Distant views afford the opportunity to view the lower Blue Mountains over the vegetation that frames the middle distance view. The foreground is predominately the rural pastoral grounds of the RHHE that accentuates the rural character of the site.

**Visual Sensitivity:**

Rouse Hill House Estate is an area with very high visual sensitivity due to its prominent setting on the ridge line, cultural and heritage significance and the dominant character that the rural setting exudes over the surrounding Precinct's.

**Visual Effect:**

Any future development within the visual catchment of the RHHE will be assessed as having a very high visual effect due to the cultural and visual significance of the home-stead. Previous studies with regards to the preservation of the visual and cultural significance of the RHHE have made strong recommendations that any development planned for within the visual curtilage of the RHHE be treated as having a very high visual effect on the rural setting of the RHHE.

Photo 1b: The ridge line that dominates the south to south west of the site provides a dense canopy of woodland vegetation and strengthens the rural / bush land character of the Precinct.

Photo 1c: District views are afforded through a narrow corridor to the south with some urban development evident in the distance. The middle distance view is created by the valley formed by Second Ponds Ck and the back drop of the riparian corridors woodland vegetation. Foreground views consists of rural pasture and outer buildings of the estate.

**Potential impact on RHHE:**

As stated above any development planned within the visual curtilage of the RHHE would need to be assessed as having a Very High visual impact with appropriate measures put in place to mitigate the overall impacts.

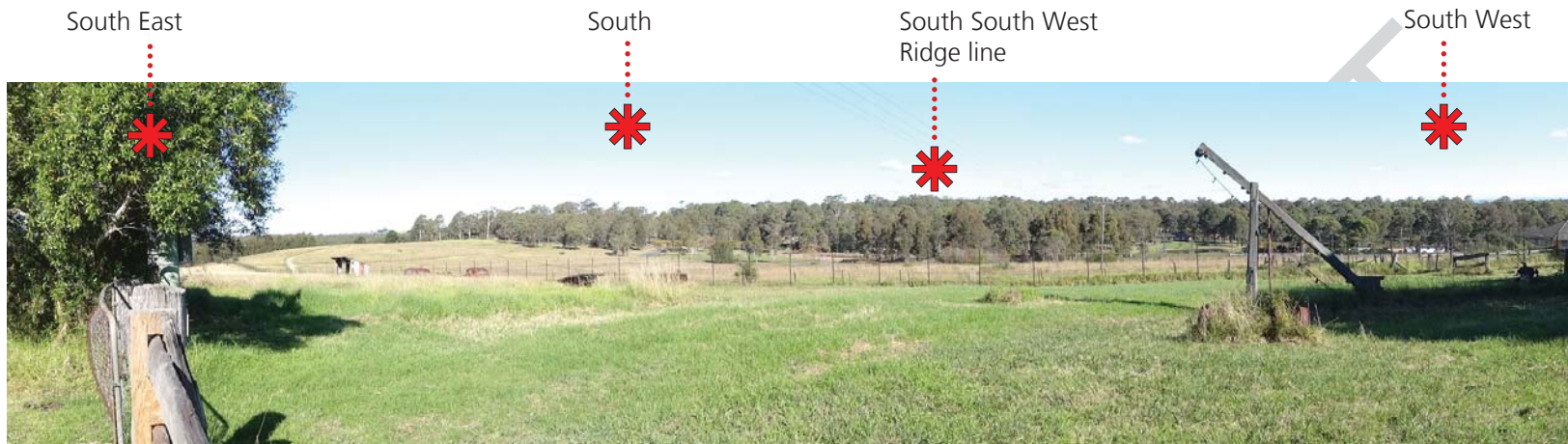


Photo No 1b: 4854

**Development potential of Area:**

- Given the sensitivity of the cultural and historical significance of the RHHE, any development within the RHHE visual curtilage will require that a concise visual assessment is undertaken for each stage of all future development applications.
- No development is permitted within the RHHE or Rouse Hill Regional Park.

**Visual Mitigation:**

- Possible impacts to the south and south east could be minimised by the preservation of the regional park woodlands and Second Ponds Ck.
- Possible impacts to the south and south west could be minimised with the retaining the ridge line vegetation along the ridge lines and rezoning the surrounding allotments as either environmental living lots with tree retention or as recreational open space.
- To reduce potential impacts to the west and north west the mid level vegetation along Guntawong Rd and adjoining allotments should be preserved and even enhanced.

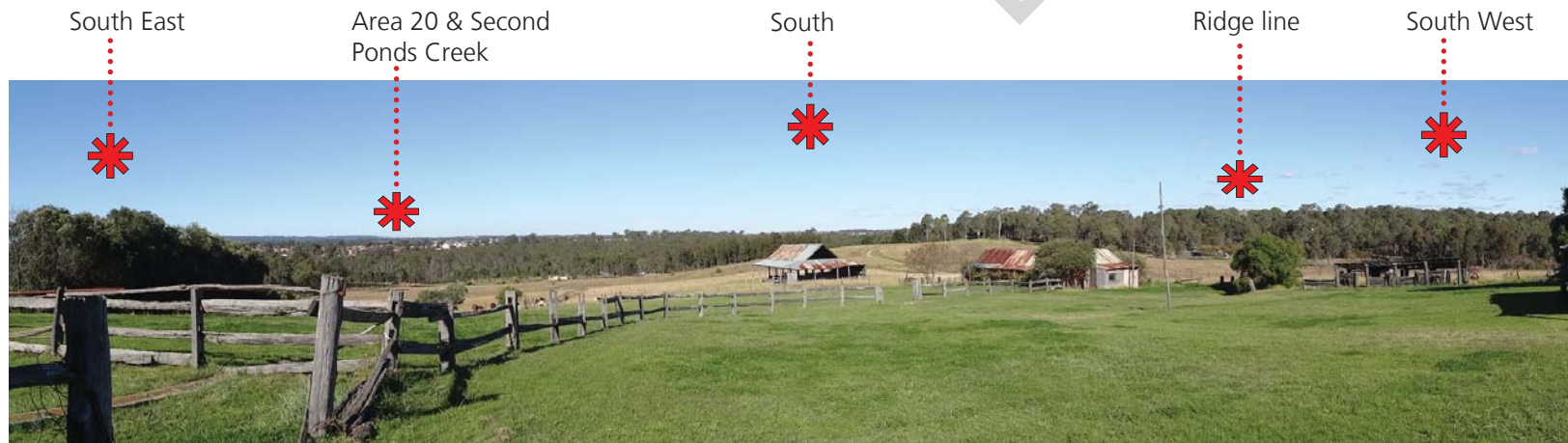


Photo No 1c: 4866





## PHOTO LOCATION 2



Photo No: 4871

### **Description of Views:**

Views looking down Guntawong Rd towards the south west provide relatively dense remnant Cumberland Pain Woodland forming framed views of the road corridor with some rural pasture generating the foreground. Looking west the middle views are predominately of pasture lands within the shallow valley leading up to the meat rendering works site that resides on the ridge line. Glimpses of the Blue Mountains can be seen on the horizon.

However, it must be noted that the Office of Environment and Heritage plan to revegetate the proposed extension of the RHRP to create significant tracts of native vegetation on the minor ridge line and around Guntawong Rd. It is anticipated that over time this planting regime will have a significant impact on the distant views to the mountains and pastoral vistas to the north west currently enjoyed from the RHHE.

### **Visual Sensitivity:**

The area within this view shed should be considered as having a High Level of visual sensitivity due to its proximity and being within the RHHE visual curtilage.

### **Visual Effect:**

The visual effect of this area has been partially mitigated with the proposed extension of the Rouse Hill Regional Park within the pastoral lands to the west and north west. Any future development in the location of the meat rendering works site would be considered as having a moderate visual effect as it would pose no further effect than the existing buildings.

### **Potential impact on RHHE:**

The proposed RHRP extension is seen as a practical solution to preserve the visual character of the RHHE and its visual and cultural curtilage and will therefore further enhance and preserve the significance of the RHHE. However, any development to the south west will have the potential to have a High impact on RHHE. Significant retention of existing trees and further landscape buffer planting is recommended.

### **Development potential of Area:**

- Given the sensitivity of the cultural and historical significance of the RHHE, any development within the RHHE visual curtilage will require that a concise visual assessment is undertaken for each stage of all future development applications.
- No development is permitted within the RHHE or Rouse Hill Regional Park.
- Any development to the south west as per the image is suitable for low density development with potential high visual impact.

### **Visual Mitigation:**

- Possible impacts to the west are minimised by the extension of the RHRP.
- Possible impacts to the south west could be minimised with the strategic retention of woodland vegetation along the Guntawong Road reserve with additional landscape buffer planting to screen development from RHHE. Appropriate land use zoning with adequate planning controls on building heights, set backs, tree preservation, roofing material and finishes would be required in order to protect and enhance the rural character of the surrounding RHHE.





## PHOTO LOCATION 3



Photo No: 4876

### **Description of Views:**

Views looking down Worcester Rd towards the south east provides generally open rural grassland vegetation to the east and contains the southern part of the RHRP. Views to the south provides vistas of relatively dense remnant Cumberland Pain Woodland forming along the north south ridge line in the middle distance. Rural allotments with some rural pasture and paddocks dominate the foreground. All views are either framed or internal.

### **Visual Sensitivity:**

The area within this view shed should be considered as having a Very High Level of visual sensitivity due to its proximity to the South of, and being contained within the RHHE visual curtilage.

### **Visual Effect:**

Any future development within the visual catchment of the RHHE will be assessed as having a Very High visual effect due to the cultural and visual significance of the homestead.

Any further loss of vegetation beyond the southern boundary of the RHHE for development would have adverse effects on the view shed from RHHE. This vegetation forms the natural backdrop that preserves the rural character of the site.

### **Potential impact on RHHE:**

The visual impact on development to the south of RHHE is deemed to be Very High unless the appropriate planning of land use zones are implemented

### **Development potential of Area:**

- Given the sensitivity of the cultural and historical significance of the RHHE, any development within the RHHE visual curtilage will require that a concise visual assessment is undertaken for each stage of all future development applications.
- No development is permitted within the RHHE or Rouse Hill Regional Park.
- Any development to the south may be suitable for recreational open space, environmental living or very low density development with potential high visual impacts.

### **Visual Mitigation:**

- Possible impacts to the south are minimised by the incorporation large scale recreational open space or sports fields with appropriate woodland buffer planting to the perimeter to retain rural pasture character.
- Possible impacts to the south could be minimised with the strategic retention of woodland vegetation along the ridge line. Appropriate land use zoning with adequate planning controls on building heights, set backs, tree preservation, roofing material and finishes would be required in order to protect and enhance the rural character of the surrounding RHHE.





## PHOTO LOCATION 4

South East into Area 20.  
View to Second Ponds Creek  
Riparian Corridor. Visually  
significant

Ridge



Photo No 4a: 4880

South East into Area 20.  
View to Second Ponds Creek Riparian Corridor.  
Screening views of neighboring development



Photo No 4b: 4881

### Description of Views:

Views looking down from the ridge line on Worcester Rd towards the south east into Area 20 is generally framed with sporadic planting of native vegetation within large rural allotments and a large school facility.

Views to the south east provides middle distance views which is terminated with the relatively dense remnant of Cumberland Pain Woodland forming along the riparian corridor of Second Ponds Creek.

Views to the east are across to the existing RHRP.

All views are either framed or middle distance.

### Visual Sensitivity:

The area within this view shed is determined to be as having a High Level of visual sensitivity as it is located on the ridge line that links to the RHHE. The vegetation that is located along the top of the ridge line is regarded as important so as to provide a visual buffer when looking from the RHHE.

Visual sensitivity is preserved to the east with the location of the RHRP.

### Visual Effect:

Any future development within the visual catchment of the RHHE will be assessed as having a High visual effect due to the cultural and visual significance of the homestead and RHRP.

Any further loss of vegetation beyond the south eastern boundary of the RHHE for development would have adverse effects on the view shed from RHHE. This vegetation forms the natural backdrop that preserves the rural character of the site.

### Potential impact on RHHE:

The visual impact on development to the south east of RHHE is deemed to be High unless the appropriate planning of land use zones are implemented.

### Development potential of Area:

- Given the sensitivity of the cultural and historical significance of the RHHE, any development within the RHHE visual curtilage will require that a concise visual assessment is undertaken for each stage of all future development applications.
- No development is permitted within the RHHE or Rouse Hill Regional Park.
- Any development to the south east may be suitable for either schools, recreational open space, environmental living or very low density development with potential high visual impacts.

### Visual Mitigation:

- Possible impacts to the south east are minimised by the incorporation of a school with adjoining large scale recreational open space or sports fields with appropriate woodland buffer planting to the perimeter to retain rural pasture character.
- Possible impacts to the south east could be minimised with the strategic retention of woodland vegetation along the ridge line. Appropriate land use zoning with adequate planning controls on building heights, set backs, tree preservation to the ridge line and to the road reserve of Worcester Rd would be required in order to protect and enhance the rural character of the surrounding RHHE.





## PHOTO LOCATION 5

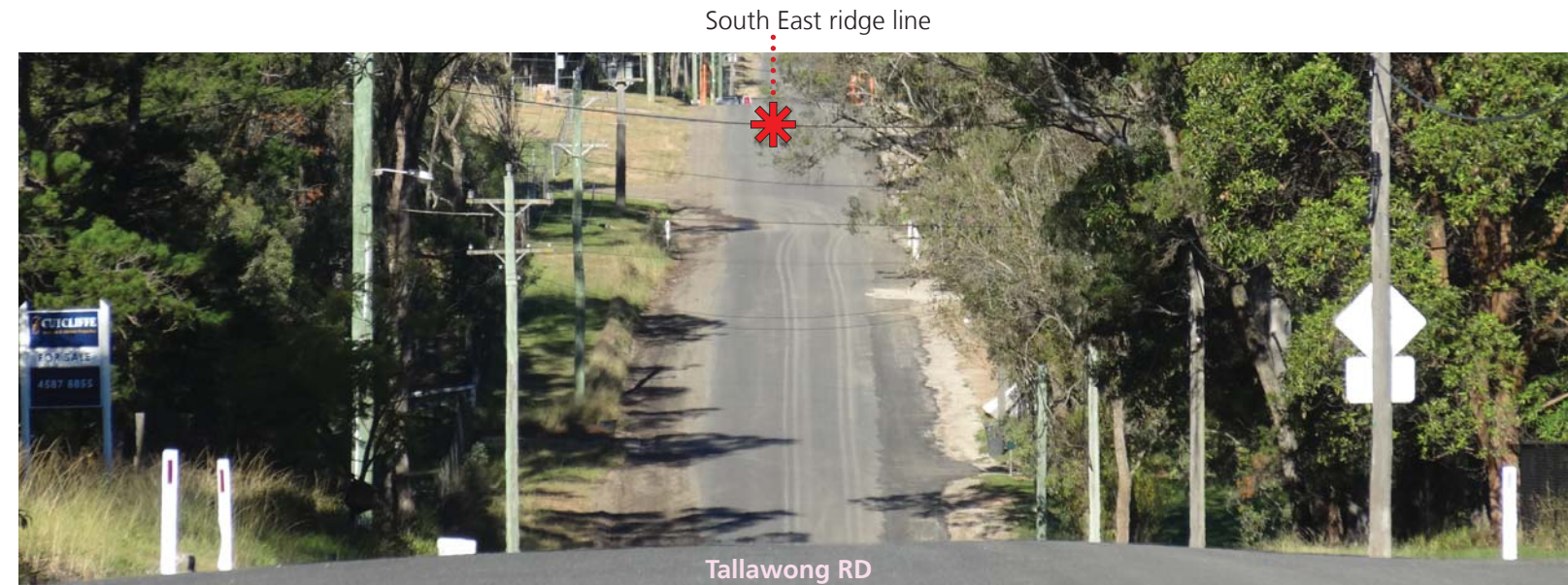


Photo No 5a: 4886



Photo No 5b: 4888



Photo No 5c: 4890

### **Description of Views:**

Photo location 5 is taken from the junction of Guntawong and Tallawong Roads and because of this intersection is a significant high point on the minor ridge.

Photo 5a: The undulating nature of Tallawong Rd provides the opportunity for only internal and framed views. The view to the south east traverse a series of gentle slopes falling away from the ridge line to the south, south west. The views are framed by the road side vegetation.

Photo 5b: Guntawong Rd looking north east is again undulating but more gentle than Tallawong Rd. The views are framed by the road side vegetation and provides a dense canopy of woodland vegetation and strengthens the rural / bush land character of the Precinct.

Photo 5c: Guntawong Rd looking south is a gentle slope down towards the low lying land of First Ponds Creek. The views are framed by the road side vegetation and provides a dense canopy of woodland vegetation and strengthens the rural / bush land character of the Precinct.

### **Visual Sensitivity:**

The area contained within this view shed is determined to be as having a Medium Level of visual sensitivity.

Although it is located on a perceived high point its location resides behind another small ridge line that separates this location from the direct view of the RHHE. The vegetation that is located along the ridge lines is regarded as important so as to provide a visual buffer when looking from the RHHE.

### **Visual Effect:**

Any future development at this location has been assessed as having a Medium visual effect due to its relatively concealed location from the visual catchment of the RHHE.

### **Potential impact on RHHE:**

The visual impact on development to the intersection of Guntawong and Tallawong Roads is deemed to be medium and therefore open to higher levels of development.

### **Development potential of Area:**

- Given the sensitivity of the cultural and historical significance of the RHHE, any development within the RHHE visual curtilage will require that a concise visual assessment is undertaken for each stage of all future development applications.
- Although located on a reasonable high point, the location lends itself as a potential village centre with the opportunity for higher density residential development in and around both of the intersecting roads.

### **Visual Mitigation:**

- Possible impacts could be minimised with the strategic retention of woodland vegetation along the ridge line and road reserve corridors.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the rural character of the Precinct.





## PHOTO LOCATION 6

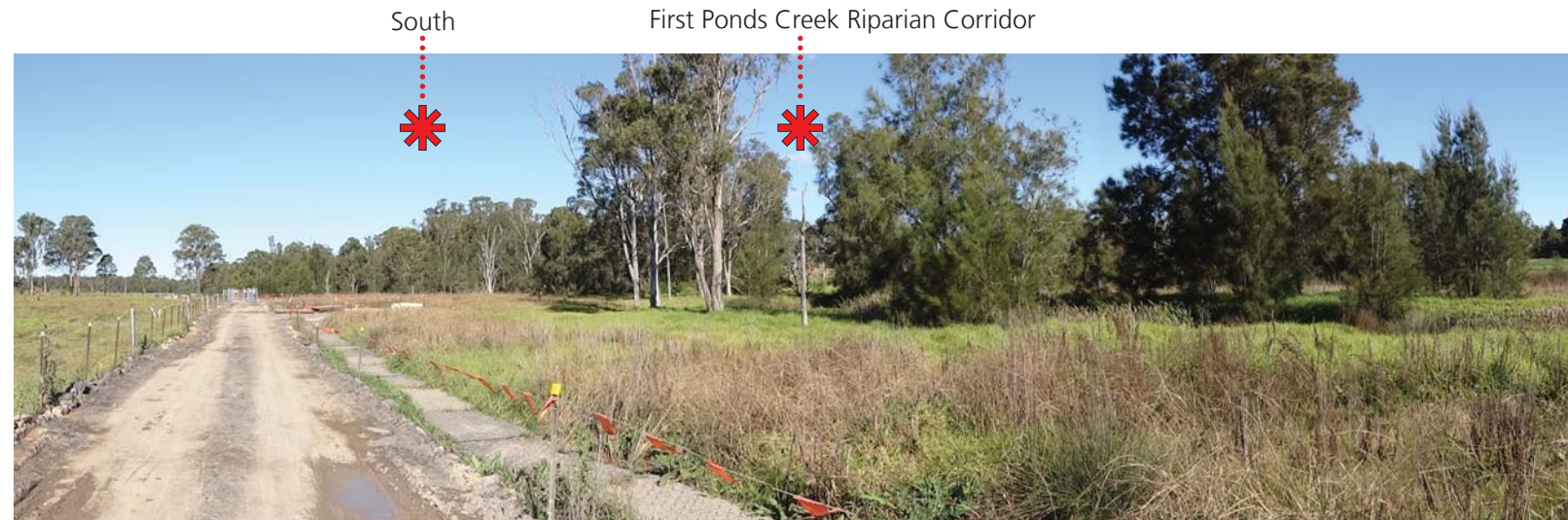


Photo No: 4894

### **Description of Views:**

Views looking south into the riparian corridor of First Ponds Creek and the fragmented Alluvial Woodland.

Views to the south provide middle distance and internal views depending on the density of the remnant vegetation or open farming lands.

Views into the creek line are infrequent and barely detectable as it has become highly disturbed.

### **Visual Sensitivity:**

From an ecological stand point the sensitivity of this view shed is considered to be Medium High. Due to the creek's classification as a 3rd order creek and as such it is required to have a 60m riparian corridor and is in need of rehabilitation.

Improved conditions and the requirement for riparian rehabilitation will make First Ponds Creek a highly visually sensitive area in the future.

### **Visual Effect:**

Any future development in and around this location has been assessed as having a Medium High visual effect due to its ecologically sensitive requirements and 60m riparian corridor.

Preservation of the existing woodlands is necessary to maintain this assessment. The corridor will provide a visual buffer to future development in the adjoining Riverstone Precinct.

### **Potential impact on RHHE:**

There should be no visual impact on the RHHE.

### **Development potential of Area:**

- Given the sensitivity of the ecological and environmental significance of the riparian corridor of First Ponds Creek, any development along this corridor will require that a visual assessment is undertaken for all future development applications.
- The location lends itself as a potential large scaled ecological and landscape buffer to any development outside the riparian corridor easement. There presents the opportunity for either public open space, trails and cycle ways along with environmental living to the fringes.

### **Visual Mitigation:**

- Possible impacts could be minimised with the retention of Alluvial woodland vegetation along the creek line and rehabilitation and revegetation.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the riparian character.





PHOTO LOCATION 7



Photo No 7a: 4895



Photo No 7b: 4897

**Description of Views:**

Photo location 7 is taken approximately half-way along Tallawong Road from a high point on a minor sloping ridge.

Photo 7a: The undulating nature of Tallawong Rd provides the opportunity for only internal and framed views. The view to the north east traverse a series of gentle slopes falling away from the ridge line to the south, south west. The views are framed by the road side vegetation.

Photo 7b: The undulations start to flatten out heading to the south east towards Schofields Rd. The vegetation to the north eastern boundary intensifies and the vegetation to the south and south western boundary starts to reduce due to the prevalence of small farms and rural practices.

**Visual Sensitivity:**

The area contained within these view sheds is deemed as having a Medium Level of visual sensitivity.

The vegetation that is located to the north eastern boundary up into the ridge lines is regarded as significant so as to provide a visual buffer and maintain the rural landscape character.

**Visual Effect:**

Any future development at this location has been assessed as having a Medium visual effect due to its relatively concealed location from the visual catchment of the RHHE.

**Potential impact on RHHE:**

There should be no visual impact on the RHHE as long as building heights remain under the heights of the surrounding ridge lines.

**Development potential of Area:**

- Given the sensitivity of the cultural and historical significance of the RHHE, any development within the RHHE visual curtilage will require that a concise visual assessment is undertaken for each stage of all future development applications.
- The location lends itself suitable for controlled residential development with the opportunity for higher density residential development further to the south east near the proposed heavy rail stabling yard near Schofields Rd.

**Visual Mitigation:**

- Possible impacts could be minimised with the strategic retention of both Alluvial woodland along First Ponds Creek and woodland vegetation along the ridge line and road reserve corridors.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the rural character of the Precinct.





## PHOTO LOCATION 8

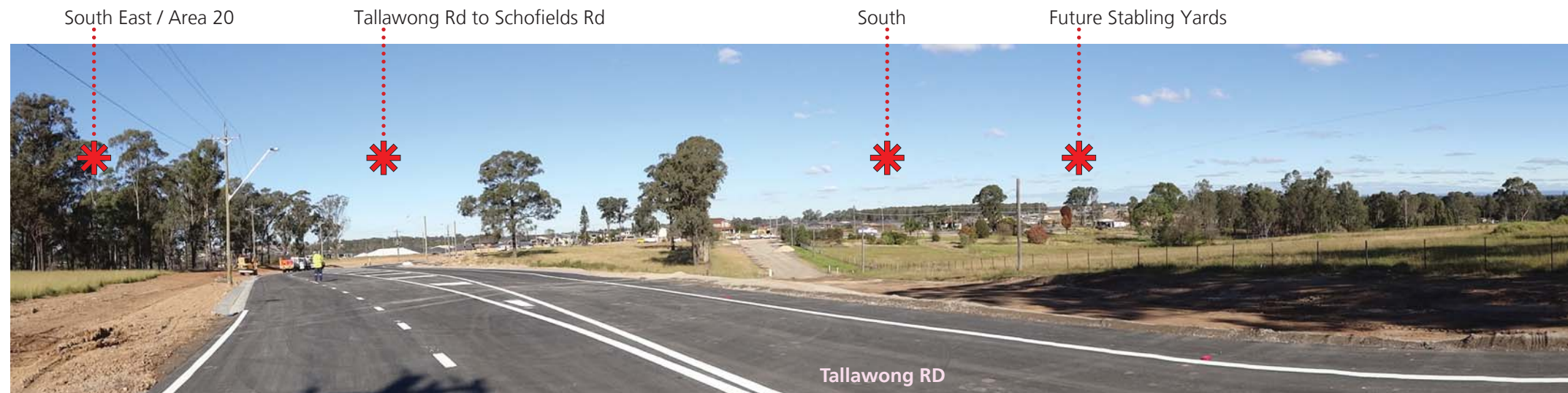


Photo No 8: 4901

### **Description of Views:**

Photo location 8 is taken approximately 400m away from the intersection of Tallawong Road and Schofields Rd. This area will become a major intersection and entry into Riverstone East Precinct from the adjoining Ponds and Alex Avenue developments in the south east.

As the majority of the land has been cleared and the slightly elevated location there are middle distance views out towards the south eastern horizon. Development along the road reserve of Schofields Rd can be seen in the middle distance.

### **Visual Sensitivity:**

The area contained within this view shed has been determined as having a Medium level of visual sensitivity.

### **Visual Effect:**

Any future development at this location has been assessed as having a Medium visual effect due to its relatively concealed location from the visual catchment of the RHHE. However, the visual effect will increase with the proposed development of the heavy rail stabling yard and increased road usage along Schofields and Tallawong Roads.

### **Potential impact on RHHE:**

There should be no visual impact on the RHHE as long as building heights remain under the heights of the surrounding ridge lines.

### **Development potential of Area:**

- The location lends itself suitable for controlled residential development with the opportunity for higher density residential development and employment zones around the proposed heavy rail stabling yard near Schofields Rd.

### **Visual Mitigation:**

- Possible impacts could be minimised with the strategic retention of both the Alluvial woodlands along First Ponds Creek to the south and existing woodland vegetation along the ridge line and Cudgegong Reserve to the north. Further mitigation could be via the establishment of a vegetated link or habitat corridor linking the two woodland communities.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the rural character of the Precinct.





## PHOTO LOCATION 9

North East to Cudgegong Rd.



Photo No: 4905

### **Description of Views:**

Photo location 9 is taken approximately half way along Macquarie Rd just before the transmission easement looking north east towards the intersection of Cudgegong Road. This area is mid way up a slope towards the ridge line located near Cudgegong Rd and is defined by the proximity of significant stands of Cumberland Plain Woodland being dissected by the cleared vegetation for the transmission easement.

The views, both to the north east and south west, are framed by the encroaching woodland vegetation along the road reserve. This gives the perception of heavily wooded vegetation to both sides of the road corridor.

### **Visual Sensitivity:**

The area contained within this view shed has been determined as having a High Level of visual sensitivity.

This view is located on the back slope of a natural high point near Cudgegong Rd to the north. Its location resides behind this ridge line separates this location from the direct view of the RHHE. The vegetation that is located along the ridge lines is regarded as important so as to provide a visual buffer when looking from the RHHE and also from the lower slopes of First Ponds Creek looking northwards back into the site.

It is also regarded as vitally important as it provides a natural screen to hide the stanchion towers of the transmission line that cuts its way from south east to north west through the site.

### **Visual Effect:**

Any future development at this location has been assessed as having a Very High visual effect due to its prominent location near a high point and dense stands of native vegetation. The woodland vegetation along this ridge line is important as it helps form the rural back ground to the RHHE.

### **Potential impact on RHHE:**

Unless large areas of vegetation is preserved within an potentially extended Cudgegong Reserve or within a landscape buffer to both sides of the transmission easement and road reserves, the visual impact on the RHHE is Very High.

### **Development potential of Area:**

- The location lends itself suitable for controlled low density residential development with the opportunity for higher density residential development further down the ridge line with controls on building heights so that they do not exceed the height of the vegetation on the ridge line.

### **Visual Mitigation:**

- Possible impacts could be minimised with the strategic retention of woodland vegetation along the ridge line road reserves and along the transmission easement. Further mitigation could be via the establishment of a vegetated link or extension of the existing Cudgegong Reserve to preserve the woodland communities along the ridge line.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the rural character of the Precinct.





## PHOTO LOCATION 10

Important stand of vegetation as natural screen and possible environmental protection

View South East to transmission easement

Important stand of vegetation as natural screen and possible environmental protection



Photo No 10a: 4906

North West along transmission easement

Important stand of vegetation as natural screen and possible environmental protection

North West to Ridge line

Significant road reserve vegetation

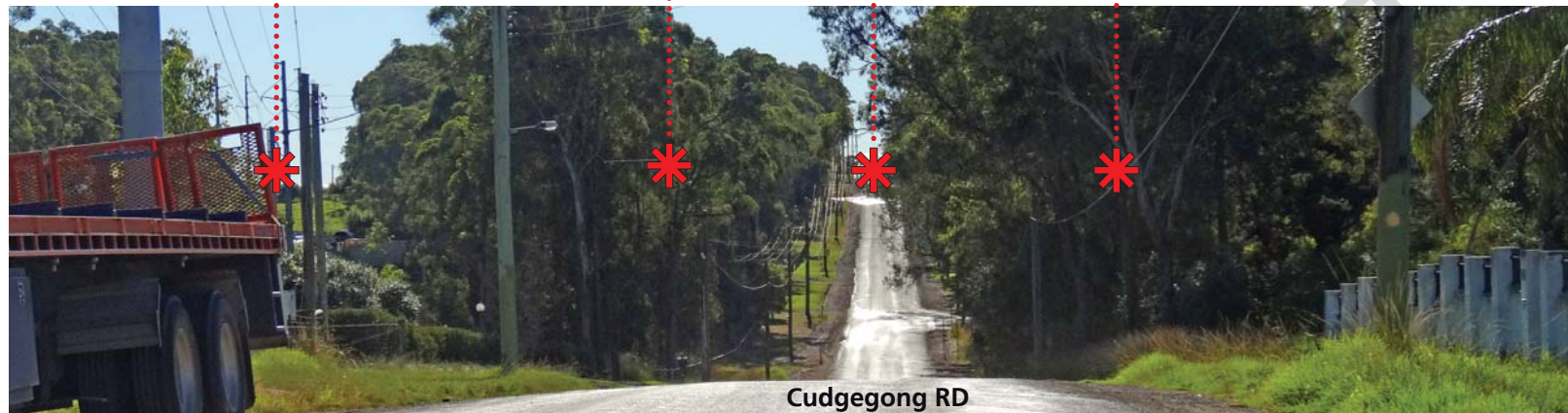


Photo No 10b: 4915

Cudgegong RD

### Description of Views:

Photo location 10a is taken approximately half way along Macquarie Rd and looking to the south east along the cleared vegetation of the transmission easement. This area is approximately 100m from the intersection of Cudgegong Rd. The framed view is contained by the proximity of significant stands of Cumberland Plain Woodland on either side of the easement with more vegetation forming the back ground of the middle distance view.

### Photo location 10b

The view looking north west back up Cudgegong Rd to the ridge line contains both the transmission easement and road cuttings and significant stands of Cumberland Plain Woodland vegetation along the road reserve. This gives the perception of heavily wooded vegetation to both sides of the road corridor and following the ridge line.

### Visual Effect:

Any future development at this location has been assessed as having a Very High visual effect due to its prominent location near a high point and dense stands of native vegetation. The woodland vegetation along this ridge line is important as it helps form the rural back ground to the RHHE.

### Development potential of Area:

- The location lends itself suitable for controlled low density residential development with the opportunity for higher density residential development further down the ridge line with controls on building heights so that they do not exceed the height of the vegetation on the ridge line.

### Visual Mitigation:

- Possible impacts could be minimised with the strategic retention of woodland vegetation along the ridge line road reserves and along the transmission easement. Further mitigation could be via the establishment of a vegetated link or extension of the existing Cudgegong Reserve to preserve the woodland communities along the ridge line.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the rural character of the Precinct.

### Visual Sensitivity:

The area contained within this view shed has been determined as having a Very High Level of visual sensitivity.

This view looks back towards one of the perceived high points of the Precinct and includes the back slope of this natural high point. This location is on and behind the ridge line and forms the backdrop of the middle distance views from the RHHE. The vegetation that is located along the ridge line is regarded as critical so as to provide a visual landscape buffer when looking from the RHHE.

It is also regarded as vitally important as it provides a natural screen to hide the stanchion towers of the transmission line that cuts its way from south east to north west through the site.

### Potential impact on RHHE:

Unless large areas of vegetation is preserved within an potentially extended Cudgegong Reserve or within a landscape buffer to both sides of the transmission easement and road reserves, the visual impact on the RHHE is Very High.





## PHOTO LOCATION 11



Photo No 11a: 4913



Photo No 11b: 4914

### **Description of Views:**

Photo location 11a is taken approximately from the perceived high point in this part of the Precinct. Looking to the south east Macquarie Rd is approximately 100m away to the right. The framed view is contained by the proximity of significant stands of Cumberland Plain Woodland on either side of the road reserve with more vegetation forming the back ground of the middle distance view.

### **Photo location 11b**

The view looking south east along Cudgegong Rd to the remnant vegetation contained in either rural lots or within the road reserve. The significant stands of Cumberland Plain Woodland vegetation gives the perception of heavily wooded vegetation to both sides of the road corridor and following the ridge line.

### **Visual Sensitivity:**

The area contained within this view shed has been determined as having a Very High Level of visual sensitivity.

This view looks back to the south east from one of the perceived high points of the Precinct and includes the back slope of this natural high point. This location is on the ridge line that forms the backdrop of the middle distance views from the RHHE. The vegetation that is located along the ridge line is regarded as vital so as to define the rural character of the Precinct and provide a visual landscape buffer when looking from the RHHE.

It is also regarded as vitally important as it provides a natural screen to hide the stanchion towers of the transmission line that cuts its way from south east to north west through the site.

### **Visual Effect:**

Any future development at this location has been assessed as having a Very High visual effect due to its prominent location as a high point and dense stands of native vegetation. The woodland vegetation along this ridge line is important as it helps form the rural back ground to the RHHE.

### **Potential impact on RHHE:**

Unless large areas of vegetation is preserved within an potentially extended Cudgegong Reserve or within a landscape buffer to both sides of the transmission easement and road reserves, the visual impact on the RHHE is Very High.

### **Development potential of Area:**

- The location lends itself suitable for controlled low density residential development with the opportunity for higher density residential development further down the ridge line with controls on building heights so that they do not exceed the height of the vegetation on the ridge line.

### **Visual Mitigation:**

- Possible impacts could be minimised with the strategic retention of woodland vegetation along the ridge line road reserves and along the transmission easement. Further mitigation could be via the establishment of a vegetated link or extension of the existing Cudgegong Reserve to preserve the woodland communities along the ridge line.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the rural character of the Precinct





## PHOTO LOCATION 12

View West to First Ponds  
Creek Riparian Corridor



Photo No: 4925

### **Description of Views:**

Photo location 12 is taken from the south east portion of Clarke Street and looks west into the scattered remnants of Alluvial Woodland vegetation that dot the alluvial plains of First Ponds Creek.

The immediate and middle distance views are of the scattered vegetation with grassland and pasture under story. Glimpses of scattered rural residential dwellings are possible through the trees.

### **Visual Sensitivity:**

From an ecological stand point the sensitivity of this view shed is considered to be Medium High. Due to the creek's classification as a 3rd order creek and as such it is required to have a 60m riparian corridor and is in need of rehabilitation.

Improved conditions and the requirement for riparian rehabilitation will make First Ponds Creek a highly visually sensitive area in the future.

### **Visual Effect:**

Any future development in and around this location has been assessed as having a Medium High visual effect due to its ecologically sensitive requirements and 60m riparian corridor.

Preservation of the existing woodlands is necessary to maintain this assessment. The corridor will provide a visual buffer to future development in the adjoining Riverstone Precinct.

### **Potential impact on RHHE:**

There should be no visual impact on the RHHE.

### **Development potential of Area:**

- Given the sensitivity of the ecological and environmental significance of the riparian corridor of First Ponds Creek, any development along this corridor will require that a visual assessment is undertaken for all future development applications.
- The location lends itself as a potential large scaled ecological and landscape buffer to any development outside the riparian corridor easement. There presents the opportunity for either public open space, trails and cycle ways along with environmental living to the fringes.

### **Visual Mitigation:**

- Possible impacts could be minimised with the retention of Alluvial woodland vegetation along the creek line and rehabilitation and revegetation.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the riparian character.





PHOTO LOCATION 13

View South East along First Ponds Creek  
Riparian Corridor with existing farmland



Photo No: 4929

**Description of Views:**

Photo location 13 is taken from approximately mid way along Clarke Street and looks south east back into the scattered remnants of Alluvial Woodland vegetation that dot the alluvial plains of First Ponds Creek.

The immediate and middle distance views are of the scattered vegetation with grassland and pasture under story. Glimpses of scattered rural residential dwellings are possible through the trees.

The open channel that is First Ponds Ck can be seen to the right and is in need of rehabilitation due to disturbance from rural and farming practices.

**Visual Sensitivity:**

From a ecological stand point the sensitivity of this view shed is considered to be Medium High. Due to the creeks classification as a 3rd order creek and as such it is required to have a 60m riparian corridor and is in need of rehabilitation.

Improved conditions and the requirement for riparian rehabilitation will make First Ponds Creek a highly visually sensitive area in the future.

**Visual Effect:**

Any future development in and around this location has been assessed as having a Medium High visual effect due to its ecologically sensitive requirements and 60m riparian corridor.

Preservation of the existing woodlands is necessary to maintain this assessment. The corridor will provide a visual buffer to future development in the adjoining Riverstone Precinct.

**Potential impact on RHHE:**

There should be no visual impact on the RHHE.

Development potential of Area:

- Given the sensitivity of the ecological and environmental significance of the riparian corridor of First Ponds Creek, any development along this corridor will require that a visual assessment is undertaken for all future development applications.
- The location lends itself as a potential large scaled ecological and landscape buffer to any development outside the riparian corridor easement. There presents the opportunity for either public open space, trails and cycle ways along with environmental living to the fringes.

Visual Mitigation:

- Possible impacts could be minimised with the retention of Alluvial woodland vegetation along the creek line and rehabilitation and revegetation.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the riparian character.





## PHOTO LOCATION 14

View South East  
Fragmented Environment



Photo No 14a: 4938

View North West  
Rural Use



Photo No 14b: 4940

### **Description of Views:**

Photo location 14a

This view is taken mid way along the private local road running perpendicular to, and approximately mid way along Clarke street. It is taken from the lower slopes of the ridge line that runs south east to north west through the site. Looking to the south east the immediate view is of open pasture and woodland understory in the foreground with the middle distance are significant stands of Cumberland Plain Woodland. The vegetation seems largely disturbed with a mix of exotic species amongst the native woodland.

Photo location 14b

This view looks north west over large rural allotments dominated by cleared pastures. The native vegetation has been mostly cleared offering middle distance views over a large expanse of cleared pasture dotted with sporadic native trees.

The dam in the foreground is the start of a highly disturbed natural tributary that feeds into First Ponds Creek.

### **Visual Effect:**

The area contained within these view sheds has been determined as having a Medium level of visual sensitivity.

### **Visual Sensitivity:**

Any future development at this location has been assessed as having a Medium visual effect due to its relatively concealed location from the visual catchment of the RHHE. However, the visual effect will increase appropriate building height controls are established for this area with more emphasis on building heights placed further up the ridge.

### **Potential impact on RHHE:**

There should be no visual impact on the RHHE as long as building heights remain under the heights of the trees on the surrounding ridge lines.

### **Development potential of Area:**

- The location lends itself suitable for controlled residential development with the opportunity for medium density residential development further down the slope and along the northern boundary alignment of Clarke Street.

### **Visual Mitigation:**

- Possible impacts could be minimised with the retention and rehabilitation of the Alluvial woodland along First Ponds Creek and strategic planting of ridge top landscape buffer planting and possible open space opportunities at the high points of the ridge line.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the rural character of the Precinct.





PHOTO LOCATION 15

Fragmented Woodland on low ridge. Visually significant.

View South East

Fragmented riparian Woodland within cleared agricultural lands. Environmentally significant

First Ponds Creek Riparian Corridor



Clarke Street

Photo No 15a: 4941

**Description of Views:**

Photo location 15a  
This view is taken from the corner of Clarke Street looking south east along the road reserve. It is taken from one of the lowest points of the Precinct and is situated in a small flood zone of First Ponds Creek.

Looking to the south east the immediate view is of open pasture and market garden farms in the foreground. Sporadic and fragmented Alluvial Woodland and Cumberland Plain Woodland form the middle distance.

A rural residential dwelling dominates the foreground.

**Visual Sensitivity:**

From an ecological stand point the sensitivity of this view shed is considered to be Medium High. Due to the creeks classification as a 3rd order creek and as such it is required to have a 60m riparian corridor and is in need of rehabilitation.

Improved conditions and the requirement for riparian rehabilitation will make First Ponds Creek a highly visually sensitive area in the future.

Views to the north and north east are regarded as having a visual sensitivity of Medium as it is located on a possible future arterial road.

**Visual Effect:**

Any future development in and around the location of First Ponds Ck has been assessed as having a Medium High visual effect due to its ecologically sensitive requirements and 60m riparian corridor.

The visual effect of any development to the north and north east along Garfield Rd East has been classified as Medium. The flood zone to the left of the image and presence of a transmission easement is not particularly suitable for large scale residential development and therefore lends itself to being utilised as either further Riparian Corridor, sports fields or potentially public open space.

**Potential impact on RHHE:**

There should be no visual impact on the RHHE.

**Development potential of Area:**

- The location to the east of Garfield Rd East lends itself suitable for controlled residential development while the western site provides the opportunity for some residential development on the higher grounds with public amenity such as sports fields, open space and riparian corridor walks and trails located within the flood prone lands.

**Visual Mitigation:**

- Possible impacts could be minimised with the rehabilitation and revegetation of the Alluvial woodland along First Ponds Creek and strategic planting of landscape buffer planting along the road reserve with large building set backs from the road.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the rural character of the Precinct.

North

Fragmented Woodland on low ridge. Visually significant.

Cleared Pastoral Land

View North East along Garfield Rd East



Garfield Rd East

Photo No 15b: 4944





## PHOTO LOCATION 16

View North East to low Ridge line

East



Photo No 16a: 4946

South

South West



Photo No 16b: 4949

### Description of Views:

Photo location 16a

This view is taken from approximately mid way along Junction Rd looking north east up to elevated land to the north of Garfield Rd east near the corner of Windsor Rd.

The immediate view is of the open pasture of either small farms or rural residential dwellings in the foreground. Sparse and fragmented Cumberland Plain Woodland intensifying up on the higher ground forms the middle distance.

Photo location 16b

This view looks taken near the corner of Garfield Rd East and Junction Rd looks south west and south from a slightly elevation position over the flood plain of First Ponds Creek in the middle distance.

The foreground is dominated with large tracts of cleared pasture within rural allotments while the native vegetation of the flood plain within the Riverstone Precinct beyond First Ponds Creek can be seen forming a natural screen in the middle distance.

### Visual Sensitivity:

Visual Sensitivity of the area captured in photo 16a to the north west of the Precinct is assessed as Medium High. It is expected that development will take place in this location. Although this location is on slightly elevated ground it is not considered as being within the visual curtilage of RHHE.

However, this location is prominent in the landscape and will require some visual mitigation from landscape buffer planting to road reserves and the opportunity for a vegetated neighbourhood park located along high points or ridge line to keep this assessment.

The area shown in image 16b is classified as having a visual sensitivity of Medium due to its low topographic setting and disturbed pasture and location of a transmission easement dissecting this part of the site.

### Visual Effect:

The visual effect of any development in the area to the north along Garfield Rd East as seen in image 16a has been classified as Medium High.

The visual effect on the area shown in photo 16b is deemed to be Medium. The flood zone shown in the image and presence of a transmission easement makes this part of the site not particularly suitable for large scale residential development and therefore lends itself to being utilised as either further Riparian Corridor, sports fields or potentially public open space.

### Potential impact on RHHE:

As this area is considered to be outside the historic and cultural visual curtilage of the RHHE, there should be no visual impact on the RHHE.

### Development potential of Area:

- The slightly elevated location to the north of Garfield Rd East lends itself suitable for controlled residential development.
- The western site provides the opportunity for some possible environmental living residential development on the higher grounds with public amenity such as sports fields, open space and riparian corridor walks and trails located within the flood prone lands.

### Visual Mitigation:

- Possible impacts could be minimised with the rehabilitation and revegetation of the Alluvial woodland along First Ponds Creek and strategic planting of landscape buffer planting along the road reserve with increased building set backs from the road.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the rural character of the Precinct





### 3.2 Summary of Existing Conditions Visual Analysis.

In summary, there are four significant and visually sensitive areas within the Precinct of Riverstone East and they include the following:

- Rouse Hill House Estate and surrounds;
- Rouse Hill Regional Park and extension;
- Cumberland Plain Woodland vegetation to ridge lines and Alluvial Woodland to First Ponds Creek; and
- Historic and present rural characteristics.

Based on the significance of the above visually sensitive elements a summary of the findings of this visual analysis study is as follows:

- Any development within the Visual Heritage Curtilage of the Rouse Hill Estate and Regional Park is required to provide a stringent visual impact report for each stage of development that falls within this visual catchment.
- All development within the heritage curtilage should be considered for the potential impacts on the physical and cultural landscape of the RHHE.
- The visual effect is related to any development within the visual catchment of the RHHE. Any development within close proximity to the RHHE are likely to have the greater visual impact and will need to be assessed accordingly.
- The existing Cumberland Plain Woodland on the ridge lines and Alluvial Woodland occurring along First Ponds Creek are important visual and natural buffers to any future development and should be retained as much as possible.
- Appropriate land use zoning with adequate planning controls on building heights, set backs, materials and finishes would be required in order to protect and enhance the rural character of the Precinct. These measures will be discussed in more detail in the following chapter.

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