



Architecture
Interior Design
Landscape Architecture
Urban Design
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AUSTRAL BRICKS

VISUAL IMPACT ASSESSMENT

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1	Draft Issue for Client Review	April 2019	KE	JH
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1.0 EXECUTIVE SUMMARY



1.0 EXECUTIVE SUMMARY

GroupGSA have been engaged by Austral Bricks to undertake an independent visual impact assessment in relation to the proposed upgrade to their existing brickmaking plant number 2 at 780 Wallgrove Road, Horsley Park.

The Proposal

Austral Brickworks proposes to upgrade their existing brickmaking plant. The upgrade includes the provision of a stack to 35m high and increased heights to existing buildings.

The following Architectural drawings were current and reviewed at the time of the writing of this report: Alterations and Additions of Plant No.2 by SBA Architects dated 26.03.2019 inclusive of DA101_B, DA102_CDA103_C, DA104_B, DA105_C, DA110_C, DA201_C, DA202_C.

The Site

The Austral Brickworks plant is located 57 kilometres from Sydney CBD, adjacent to the M4 and M7 Motorways and the Prospect Reservoir.

An assessment of the potential visual impacts of the development was undertaken on the basis of fieldwork and observations carried out in April 2019. The field assessment included documenting and assessing the potential visual exposure of the proposal, the potential effect of the proposal on the existing character of the immediate and wider context and the potential effects on existing views from the public domain including roads, infrastructure and reserves.

Adjacent Character

The site is situated within an existing Agricultural Land Use Zone, Western Sydney Parklands and located adjacent to Parkland surrounding Prospect Reservoir to the east, an Industrial zone to the north and the M7 Motorway to the west.

Visual Impact Assessment

The Visual Impact Assessment is based on an assessment of the visual significance of the proposed built development on the surrounding context. Six key view points into the site have been assessed for visual sensitivity and visual magnitude, taking into account the regional aspects.

Conclusion

No viewpoints were identified to suffer from significant (high) visual impacts as a result of the proposed development. It was generally noted that the sites with the highest visual magnitude were generally from less sensitive view receivers such as Industrial and Commercial Zones, with exception to View 2. View 2 is set in a rural residential context in close proximity to the study site.

View 8 has the most significant (High-moderate) visual impact given its proximity immediately the site along Ferrers Road.

The following explanations were found to be key factors at a number of sites and consistently affected the magnitude ratings generated:

- The proposed development is at most commonly screened by topography or established vegetation
- Viewpoint character and context is not sensitive to the view of the proposed development due to being predominantly from Industrial and Commercial Zones
- Viewing distances are long and thus the development is difficult to distinguish or is viewed within a much larger overall context

2.0 SITE CONTEXT



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Site Description

The Austral Brickworks plant is located 57 kilometres from Sydney CBD, adjacent to the M4 and M7 Motorways and the Prospect Reservoir. Refer Figure 1 and 2 adjacent for Sydney Regional and Western Sydney context.

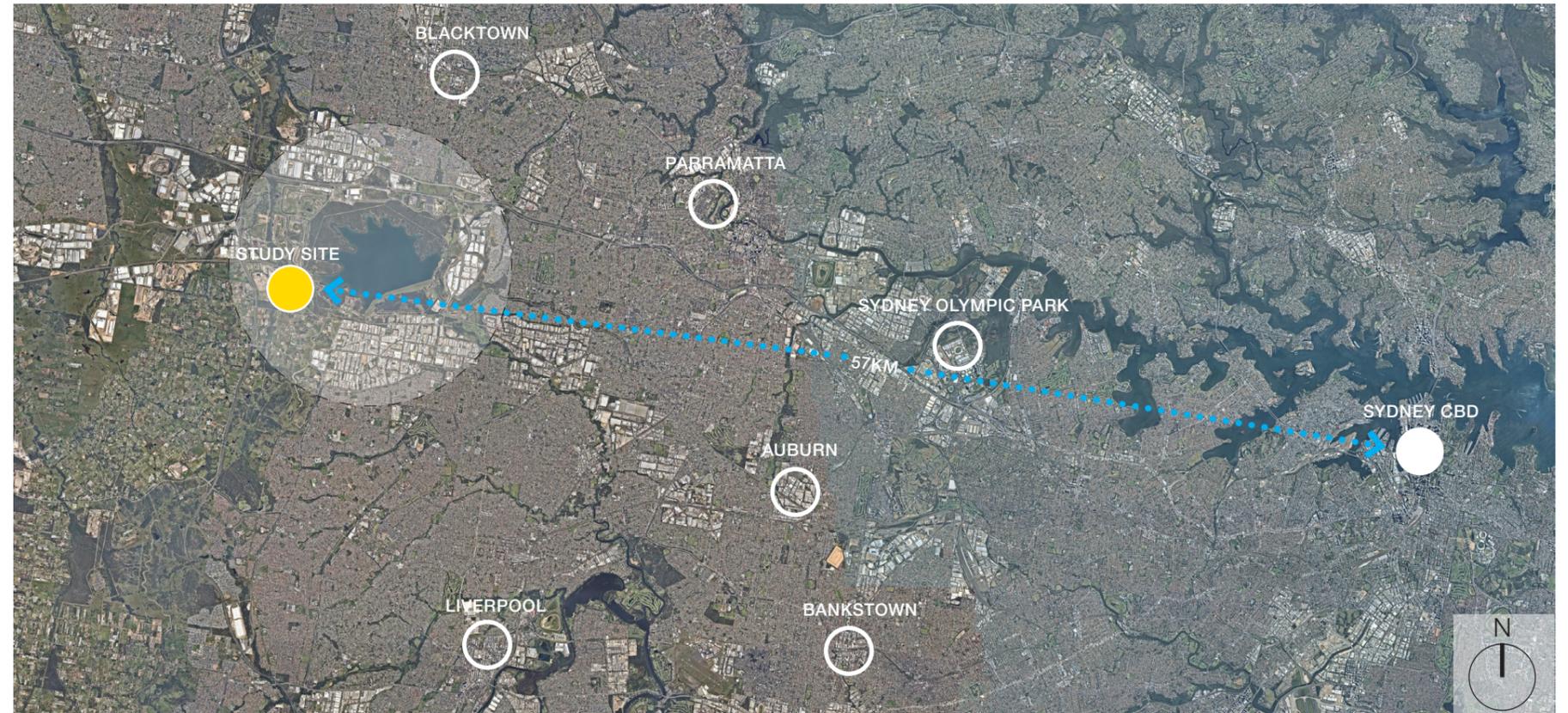


Figure 1 - Sydney Context

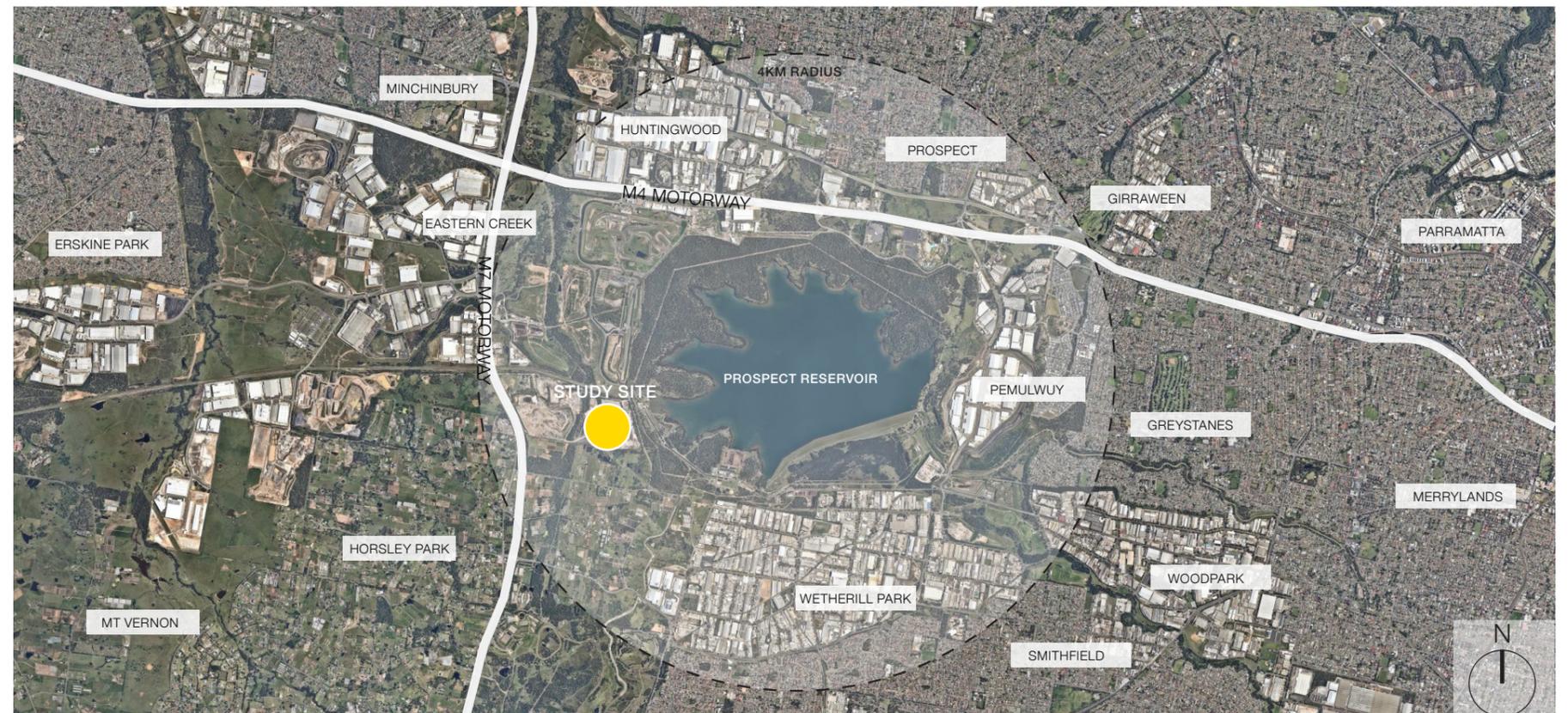


Figure 2 - Western Sydney Context

- KEY
-  4km Radius (included on all drawings to provide scale reference)
 -  Austral Brickworks Study Site Location

Local Site Context

The site is located on Ferrers Road in Horsley Park, adjacent to Prospect Reservoir, Horsley Park Urban Farms and Sydney Motorsport Park in Eastern Creek. Refer Figure 3 adjacent.



Figure 3 - Local Context



- KEY
-  4km Radius
 -  Austral Brickworks Study Site Location

Land Use

The site is situated within an existing Agricultural Land Use Zone and located adjacent to Parkland surrounding Prospect Reservoir to the east and an Industrial zone to the north.

In the preparation of the site sections in the Visual Assessment chapter of this report the following built form heights have been assumed as per the corresponding land use:

- Industrial and Commercial Zones: 15m
- Parkland and areas of vegetation: 20m
- Residential Zones: 5m

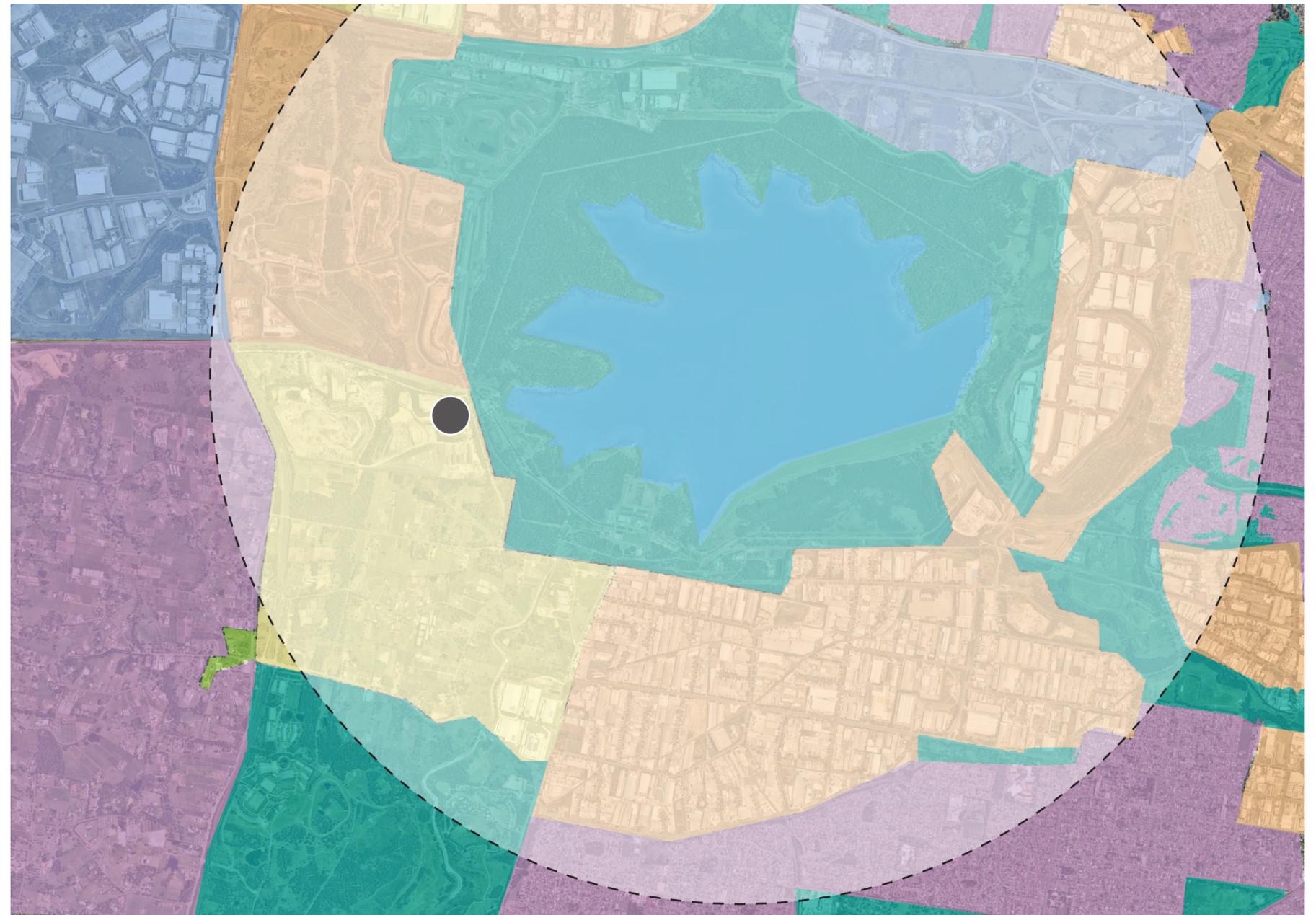


Figure 4 - Land Use Plan (sourced from Near Maps 2019 and graphic amended to suit report)

KEY

- Agricultural Land Use
- Commerical Land Use
- Education Land Use
- Industrial Land Use
- Parkland Land Use
- Residential Land Use
- Water Land Use
- 4km Radius
- Austral Brickworks Study Site Location

Western Sydney Parklands Context

The site is located within the area designated as the Western Sydney Parklands and is therefore important to assess in terms of visual sensitivity to publically accessible recreational spaces. These areas have been captured in the selection of the 6 view points assessed in the following pages.

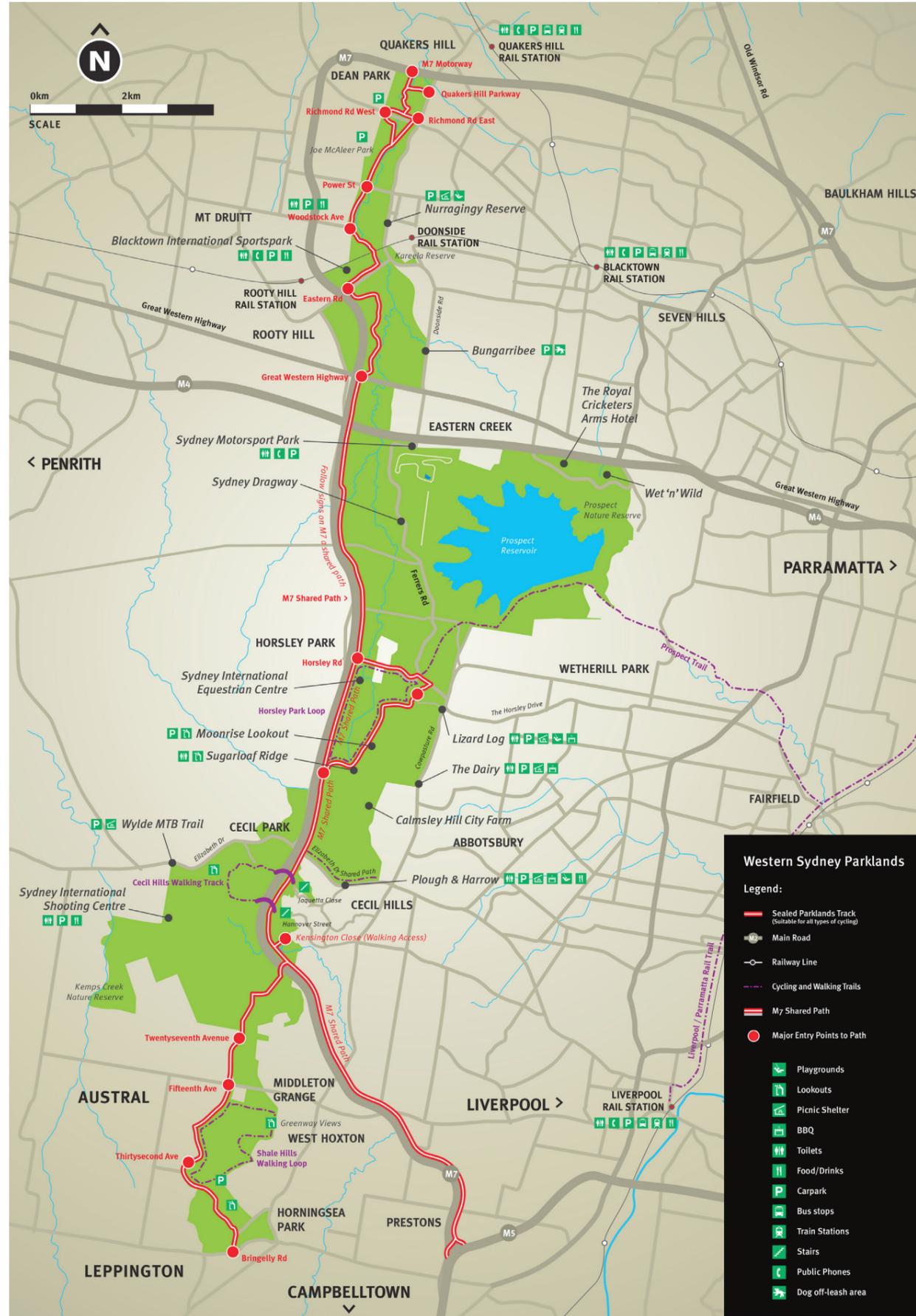


Figure 5 - Local Context

Topography

The topography of the zone surrounding the site varies from less than RL +50.00 above sea level to RL +150.00 at Sugarloaf Ridge in Horsely Park. The site sits at approximately RL +65.00.

It is therefore assumed that the maximum height of the built form in the proposed development will be at RL +100.00.

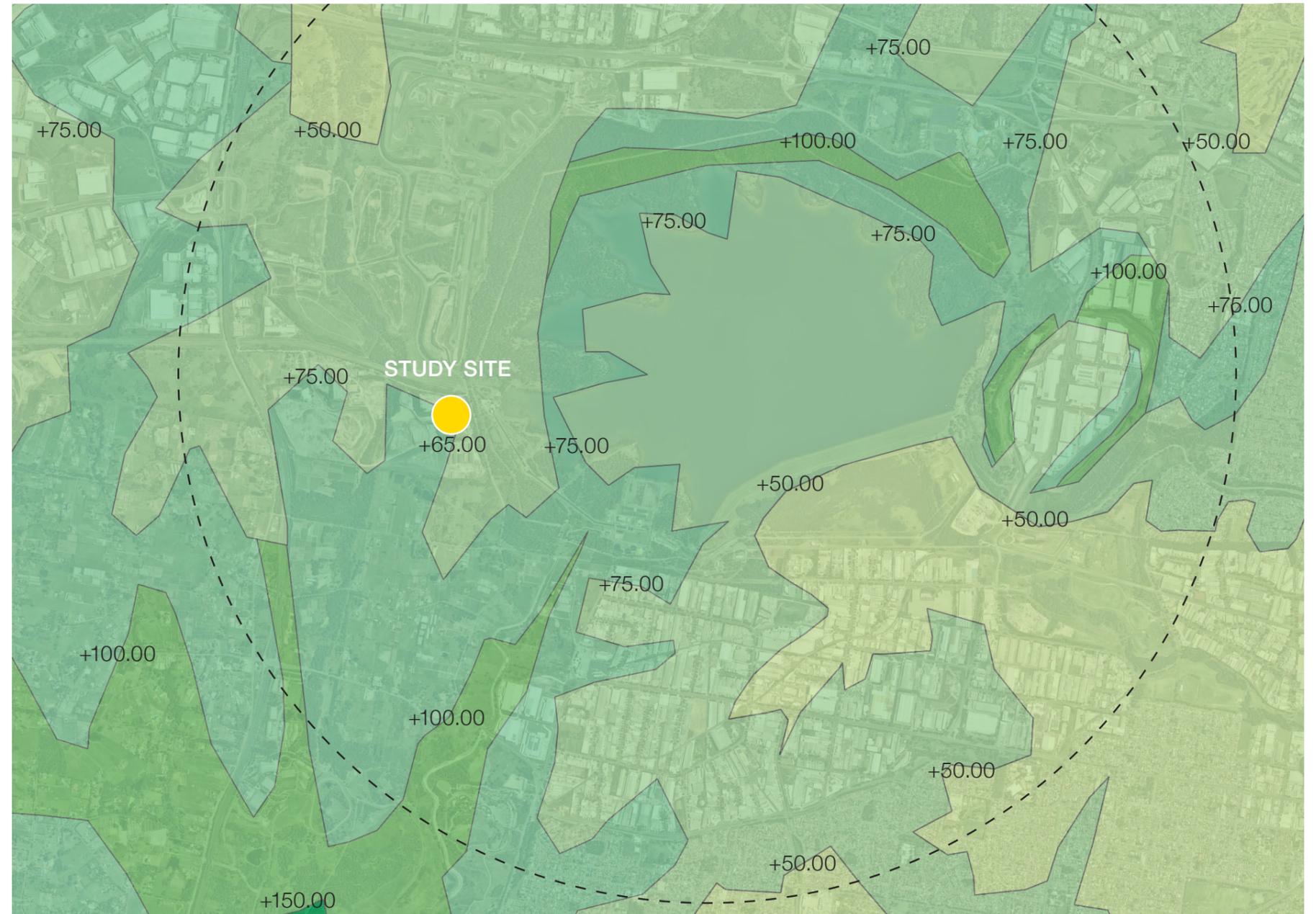


Figure 6 - Topography Plan (sourced from Near Maps 2019 and graphic amended to suit report)

KEY

- RL + 50.00 and below
- RL + 50.00 to + 75.00
- RL + 75.00 to + 100.00
- RL + 100.00 to + 150.00
- 4km Radius
- Austral Brickworks Study Site Location

3.0 VISUAL IMPACT ASSESSMENT



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3.1 TERMS USED IN THIS REPORT

The following provides a brief description of the terms which have been used within this report

- **Landscape character:** The aggregate of built, natural and cultural aspects that make up an area and provide its unique sense of place. Landscape in this context is taken to include all aspects of a tract of land - the built, planted and natural topographical and ecological features
- **Magnitude:** The scale, form and character of a development proposal. In the case of visual assessment also how far the proposal is from the viewer. Combined with sensitivity, magnitude provides a measurement of impact
- **Sensitivity:** The sensitivity of a landscape character zone or view and its capacity to absorb change. Combined with magnitude, sensitivity provides a measurement of impact
- **View:** The sight or prospect of some landscape or scene
- **Visual catchment:** The extent of the area that the proposal will be visible from
- **Visual impact:** The impacts on the views from residences and other public places
- **Visual impact rating:** A visual impact rating is determined by cross-referencing magnitude with sensitivity and is measured in the following grades:
 - High
 - High to Moderate
 - Moderate
 - Moderate to Low
 - Low
 - Negligible
- Further information relating to the assessment methodology and calculation of ratings is provided in section 4.0.

3.2 METHODOLOGY

DESKTOP STUDY

A desktop study was carried out on figures presented in Section 3.0 Site Context to identify critical view sheds. These mapping exercises were used to identify locations of known or possible views to be investigated during the fieldwork phase.

FIELDWORK AND PHOTOGRAPHY

Following the desktop study, the fieldwork component involved site inspections during which the existence and extent of views was explored in detail from surrounding areas. Site inspections were carried out on 10th April 2019.

ASSESSMENT OF VISUAL IMPACT

For each view, visual sensitivity and visual magnitude have been rated as per the definitions on the opposite page. A visual impact rating has been determined by cross-referencing visual sensitivity with magnitude. Table 1 has been used to identify the visual impact rating of the views.

An explanation of each visual impact rating is explained below:

High: The visual impact on these viewers is significant and would typically require amelioration at the site planning stage.

Moderate: The visual impact on these viewers is at a localised scale and can be mitigated or already has some existing screening or an existing setback which minimises visual impact.

Low: The visual impact on these viewers is considered low and no or very little amelioration is required.

Negligible: The visual impact on these viewers is considered very low or non-existent and no amelioration is required.

SENSITIVITY

Sensitivity can be described by the following definition:

The sensitivity of a landscape character zone or view and its capacity to absorb change. Combined with magnitude, sensitivity provides a measurement of impact.

Sensitivity is determined by assessing the context at the view location. The following examples are provided as a guide:

- Residential context - Low capacity to absorb change due to potential impacts on day-to-day lives of local residents. High sensitivity.
- Industrial context - High capacity to absorb change due to dynamic use patterns, limited hours of high use levels and regular change within character area. Typically self-contained built form with limited views in/out. Low sensitivity.
- Commercial context - High to moderate capacity to absorb change depending on land use and built form character. May include office blocks or low-rise business parks. Moderate to low sensitivity depending on type.

- Open space context - Highly varied capacity to absorb change depending on open space typology and character. An expansive open space dominated by views to further green areas will have a low capacity to absorb change. A linear pedestrian link in an urban context may have a high capacity to absorb change if it is in a dynamic location with competing demands on users. High to Low sensitivity depending on character.
- Transport corridor - High to moderate capacity to absorb change depending on surrounding character and context. As a dynamic environment typically experienced from a moving position, transport corridors can tolerate high levels of change and are typically expected to continually change and adapt. Low sensitivity.

MAGNITUDE

Magnitude can be described by the following definition:

The scale, form and character of a development proposal. In the case of visual assessment also how far the proposal is from the viewer. Combined with sensitivity, magnitude provides a measurement of impact.

Magnitude is assessed by determining the overall significance of the proposal each view. It can be summarised simply as the level of change proposed.

The following factors are key measurements to be taken into consideration:

- Existing screening
- Apparent size (often determined by distance between the viewer and the proposal)
- Visual context - Presence (or absence) of any items which provide context and scale to the proposal.

Table 1: Visual impact rating table

		Magnitude					
		High	High - moderate	Moderate	Moderate - Low	Low	Negligible
Sensitivity	High	High	High	High - moderate	High - moderate	Moderate	Negligible
	High - moderate	High	High - moderate	High - moderate	Moderate	Moderate	Negligible
	Moderate	High - moderate	High - moderate	Moderate	Moderate	Moderate - Low	Negligible
	Moderate - Low	High - moderate	Moderate	Moderate	Moderate - Low	Moderate - Low	Negligible
	Low	Moderate	Moderate	Moderate - Low	Moderate - Low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible

3.3 VISUAL IMPACT ASSESSMENT

The view locations and site sections as shown in Figures 7 and 8 adjacent, have been selected to consider a variety of viewpoints from the surrounding areas to the site as determined in Section 3.0 Site Context and enable a comprehensive analysis. An visual impact assessment of all critical view locations is included on the following pages.

Given the scale of the viewing distances, vertical/horizontal exaggerated has been applied to the site sections for visual clarity.



Figure 7 - Section Locations



- KEY
-  4km Radius
 -  Austral Brickworks Study Site Location
 -  Section Locations

3.4 PHOTOGRAPH VIEW LOCATIONS

Figure 8 shows the various photo view locations looking towards the site. All photographs were taken with a Pentax K10D DSLR camera with a focal length of 18mm.

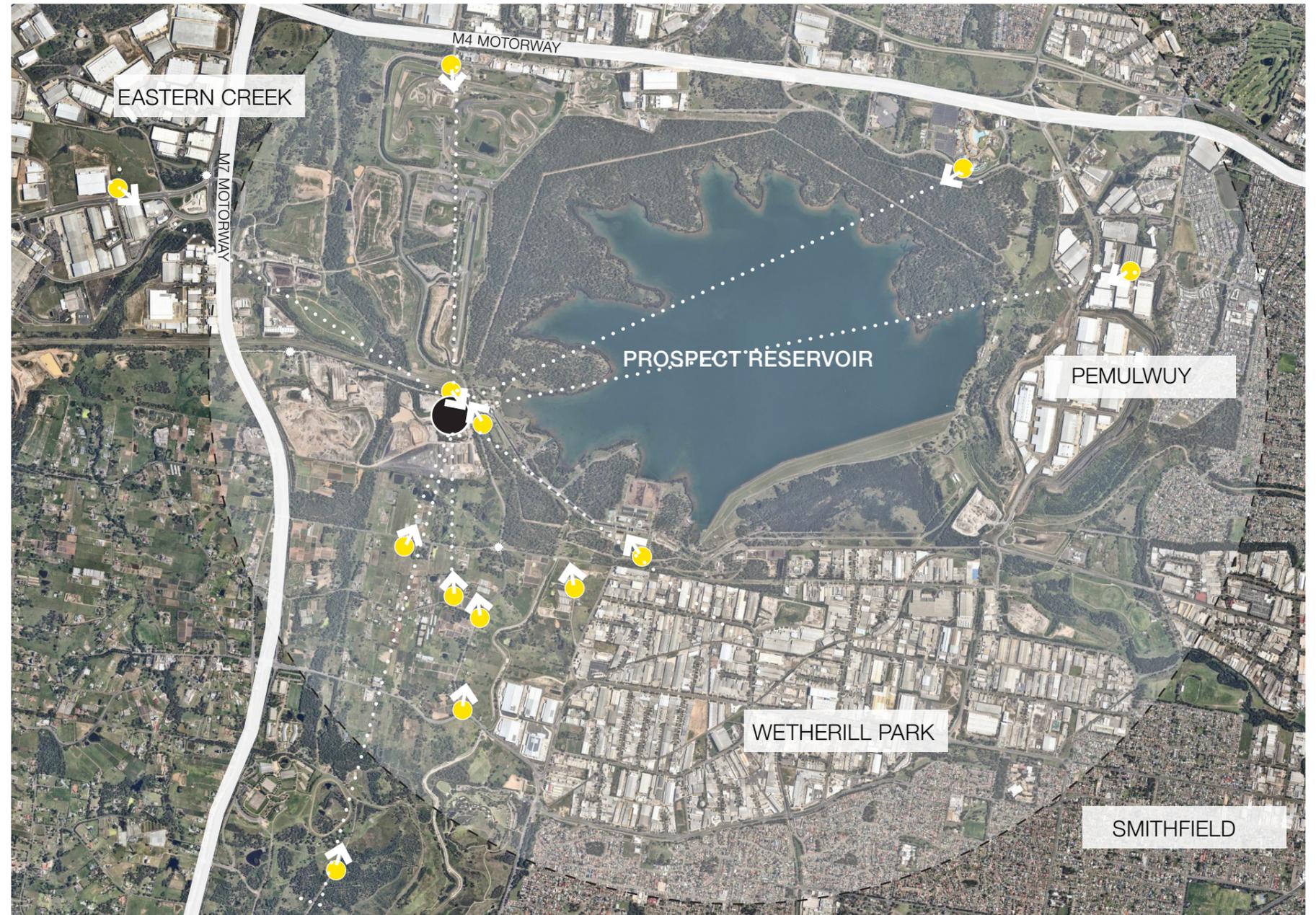


Figure 8 - View Locations



- KEY
-  4km Radius
 -  Austral Brickworks Study Site Location
 -  View Locations

VIEW ANGLE 1

Direction and distances

View angle 1 has been taken from Sugarloaf Ridge, Horsley Park looking north towards the site.

The viewing distance is approximately 3.9km from the site.

View descriptions

View angle 1 was selected for its elevation above the study site and its public lookout/parkland land use.

The view foreground consists of a sloping hillside towards undulating lower hills covered in mature trees and vegetation. A slight view of the lower lying land in the background can be seen, however from this distance it is difficult to make out exactly how visible the proposed development would be from this viewpoint alone. The section in Figure 9 on the next page demonstrates the layers of topography, vegetation and built form that exist between the viewpoint and the site.

Visual sensitivity

- Viewing Context: Public Parkland
- Measure of Sensitivity: Moderate

This view has been assessed as a moderate level of visual sensitivity due to the public access and use of the area. There are multiple lookout points and a memorial that qualify this area as a place of local significance.

Visual magnitude

- Distance from viewer: Far (3.9km)
- Proposed Development: Industrial, Mid Rise (35m/8 storeys)
- Measure of Magnitude: Moderate-Low

This view has been assessed as a low- moderate level of magnitude. This measure has been allocated considering the potential mitigation qualities of distance and existing vegetation and layering but also considers that the quality and conformity of the horizon line is of importance to a public lookout.

Visual impact rating

Moderate



View 1- Sugarloaf Ridge to the site



Section 01

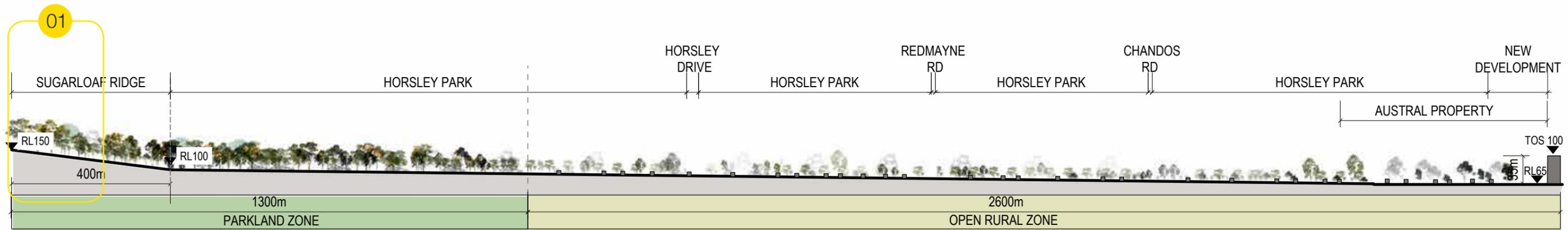


Figure 9 - Section 01 - Sugarloaf Ridge to the site



VERTICAL SCALE 1:5,000 METRES@A3



HORIZONTAL SCALE 1:10,000 METRES@A3



VIEW ANGLE 2

Direction and distances

View angle 2 has been taken from Chandos Road, Horsley Park looking north towards the site.

The viewing distance is approximately 1.0km from the site.

View descriptions

View angle 2 was selected for its close and immediate proximity to the study site and its rural residential land use.

The view foreground consists of low grassland and property fencing. The middle ground consists of rural residential buildings and mature vegetation including a high voltage power line and easement. The background consists of the soil stockpile on the study site. The section in Figure 10 on the next page demonstrates the layers of vegetation and built form that exist between the viewpoint and the site.

Visual sensitivity

- Viewing Context: Agricultural/Rural Residential
- Measure of Sensitivity: High-moderate

This view has been assessed as a high-moderate level of visual sensitivity due to the residential use of the area. It has not been assessed as high as it is very low density residential with a dual purpose of agriculture.

Visual magnitude

- Distance from viewer: Immediate (1.0km)
- Proposed Development: Industrial, Mid Rise (35m/8 storeys)
- Measure of Magnitude: High-moderate

This view has been assessed as a high-moderate level of magnitude. This measure has been allocated considering the limitation of potential mitigation opportunities.

Visual impact rating

High-Moderate



View 2- Chandos Street to the Site



Section 02

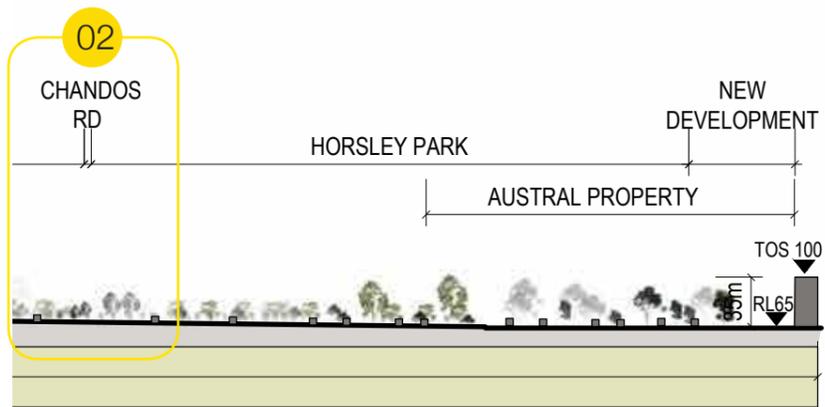
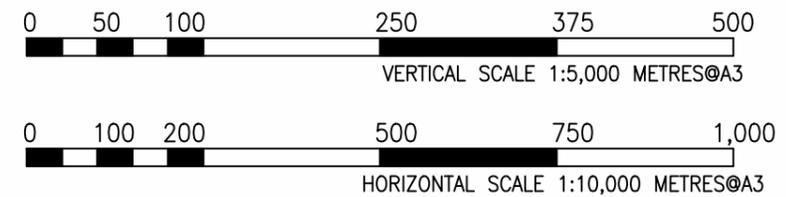


Figure 10 - Section 02 - Chandos Road to the site



VIEW ANGLE 3

Direction and distances

View angle 2 has been taken from Wetherill Park Industrial Zone looking north-west towards the site.

The viewing distance is approximately 2.8km from the site.

View descriptions

View angle 3 was selected due to its close proximity to the site on the edge of the Wetherill Park Industrial Zone.

The view foreground consists of the Horsely Park public cycle way and the boundary fence for the Prospect Reservoir water plant zone. The middleground consists of a mature tree canopy, obscuring views beyond. The section in Figure 10 on the next page demonstrates the layers of vegetation and built form that exist between the viewpoint and the site.

Visual sensitivity

- Viewing Context: Industrial
- Measure of Sensitivity: Low

This view has been assessed as a low level of visual sensitivity due to the predominantly industrial and non-residential use of the area.

Visual magnitude

- Distance from viewer: Mid (2.8km)
- Proposed Development: Industrial, Mid Rise (35m/8 storeys)
- Measure of Magnitude: Low

This view has been assessed as a low level of magnitude. This measure has been allocated considering the potential mitigation qualities of distance, slightly rising topography towards the proposed development and the existing vegetation and layering.

Visual impact rating

Low



View 3- Wetherill Park Industrial Zone to the site



Section 03

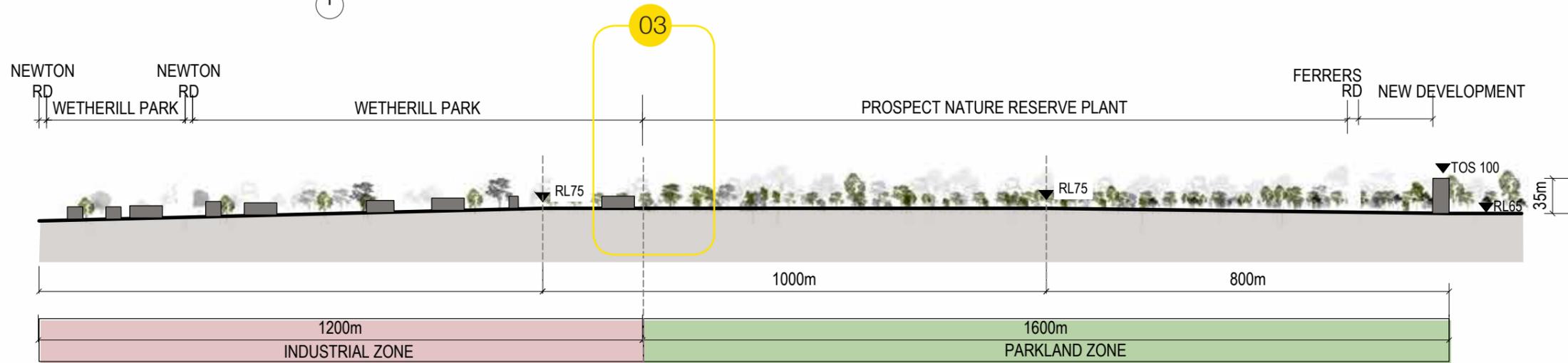


Figure 11 - Section 03 - Wetherill Park Industrial Zone to the site



VERTICAL SCALE 1:5,000 METRES@A3



HORIZONTAL SCALE 1:10,000 METRES@A3



VIEW ANGLE 4

Direction and distances

View angle 3A has been taken from Reconciliation Rise, Pemulwuy looking west towards the site.

The viewing distance is approximately 4.9km from the site.

View descriptions

View angle 4A was selected due to its location directly to the east across the Reservoir from the proposed development.

The view foreground consists of Reconciliation Rise road in Pemulwuy Industrial Zone framed by semi-mature street trees. The middleground consists of Industrial built form and the background is a rolling green hill with a vegetation layer above. The section in Figure 11 on the next page demonstrates the topography, layers of vegetation and built form that exist between the viewpoint and the site.

View 04B has been included to demonstrate the immediate view of the proposed development along the section line, viewed from Ferrers Road.

Visual sensitivity

- Viewing Context: Industrial
- Measure of Sensitivity: Low

This view has been assessed as a low level of visual sensitivity due to the predominantly industrial and non-residential use of the area.

Visual magnitude

- Distance from viewer: Far (4.9km)
- Proposed Development: Industrial, Mid Rise (35m/8 storeys)
- Measure of Magnitude: Negligible

This view has been assessed as a negligible level of magnitude. This measure has been allocated considering the potential mitigation qualities of distance towards the proposed development and the existing vegetation and layering.

Visual impact rating

Negligible



View 4A -Reconciliation Rise Pemulwuy to the site



View 4B-Ferrers Road immediately in front of the site



Section 03

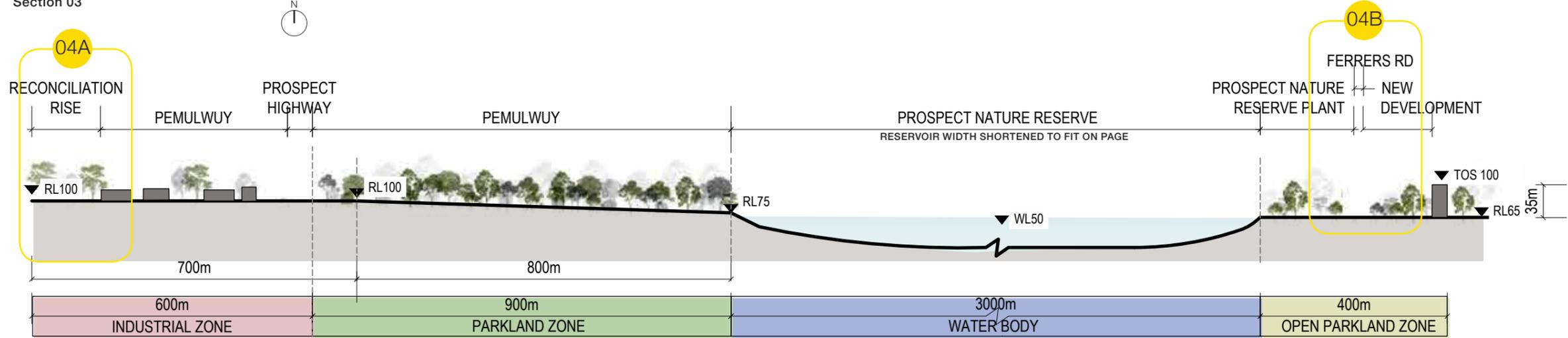
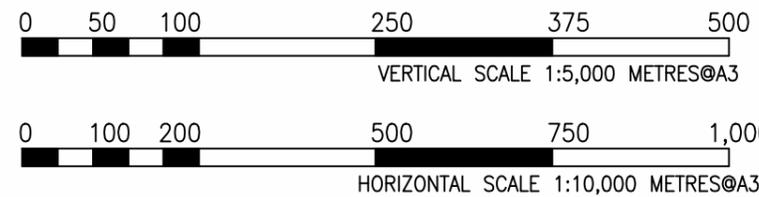


Figure 12 - Section 04 - Reconciliation Rise Pemulwuy to the site



VIEW ANGLE 5

Direction and distances

View angle 5 has been taken from Wet n Wild Theme Park looking south west towards the site.

The viewing distance is approximately 3.9km from the site.

View descriptions

View angle 4 was selected due to its location across the Reservoir to the north-east of the proposed development.

The view foreground consists of Reservoir Road and mature parkland vegetation. No middle and background can be seen. The section in Figure 12 on the next page demonstrates the topography, layers of vegetation and built form that exist between the viewpoint and the site.

Visual sensitivity

- Viewing Context: Commercial
- Measure of Sensitivity: Low

This view has been assessed as a low level of visual sensitivity due to the predominantly commercial and non-residential use of the area.

Visual magnitude

- Distance from viewer: Far (3.9km)
- Proposed Development: Industrial, Mid Rise (35m/8 storeys)
- Measure of Magnitude: Negligible

This view has been assessed as a negligible level of magnitude. This measure has been allocated considering the potential mitigation qualities of the existing vegetation and distance towards the proposed development.

Visual impact rating

Negligible



View 5- Wet n Wild Theme Park to the site



Section 05

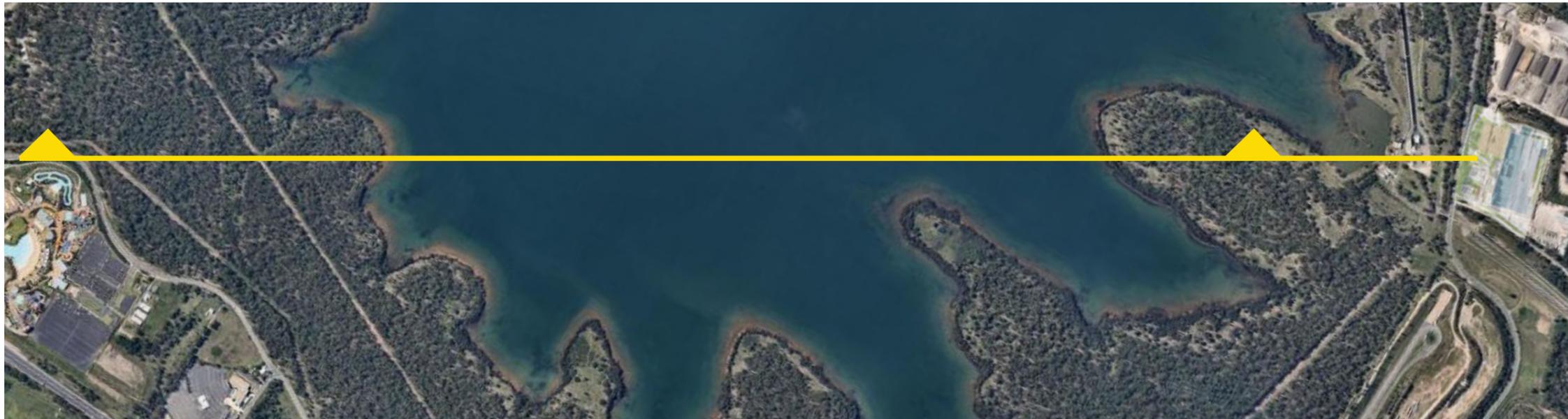
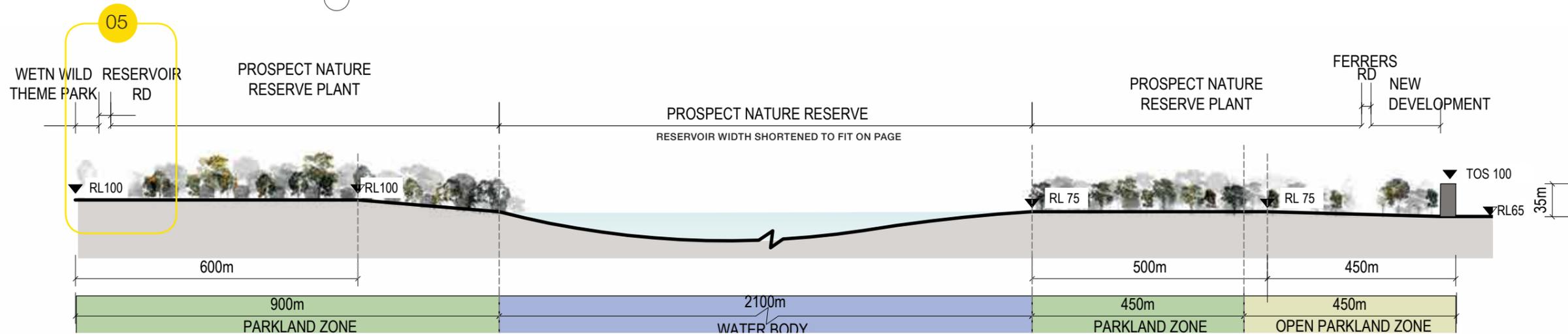


Figure 13 - Section 05- Wet n Wild Theme Park to the site



VERTICAL SCALE 1:5,000 METRES@A3



HORIZONTAL SCALE 1:10,000 METRES@A3



VIEW ANGLE 6

Direction and distances

View angle 6 has been taken from Ferrers Road near the M4 Motorway, Eastern Creek looking north towards the site.

The viewing distance is approximately 2.5km from the site.

View descriptions

View angle 6 was selected due to proximity to the M4 Motorway and Sydney Motorsport Park recreational area.

The view foreground consists of Ferrers Road in Eastern Creek framed by semi-mature street trees. The middleground consists of a layer of vegetation and the background industrial built form. The section in Figure 13 on the next page demonstrates the topography, layers of vegetation and built form that exist between the viewpoint and the site.

Visual sensitivity

- Viewing Context: Industrial (also recreational)
- Measure of Sensitivity: Low

This view has been assessed as a low level of visual sensitivity due to the predominantly industrial and non-residential use of the area, with some consideration for the recreational use of Sydney Motorsport Park.

Visual magnitude

- Distance from viewer: Mid (2.5km)
- Proposed Development: Industrial, Mid Rise (35m/8 storeys)
- Measure of Magnitude: Moderate-Low

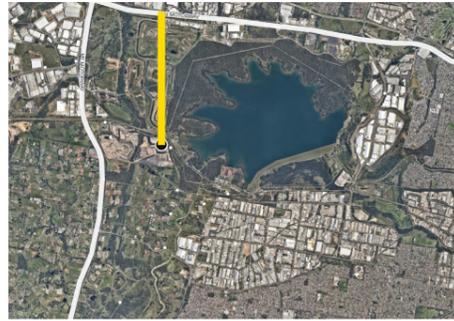
This view has been assessed as a moderate-low level of magnitude. This measure has been allocated considering that the viewpoint sits almost level with the proposed development and some vegetation openings to allow for built form to be viewed in the distance.

Visual impact rating

Moderate-Low



View 6- M4 Motorway to the site



Section 06

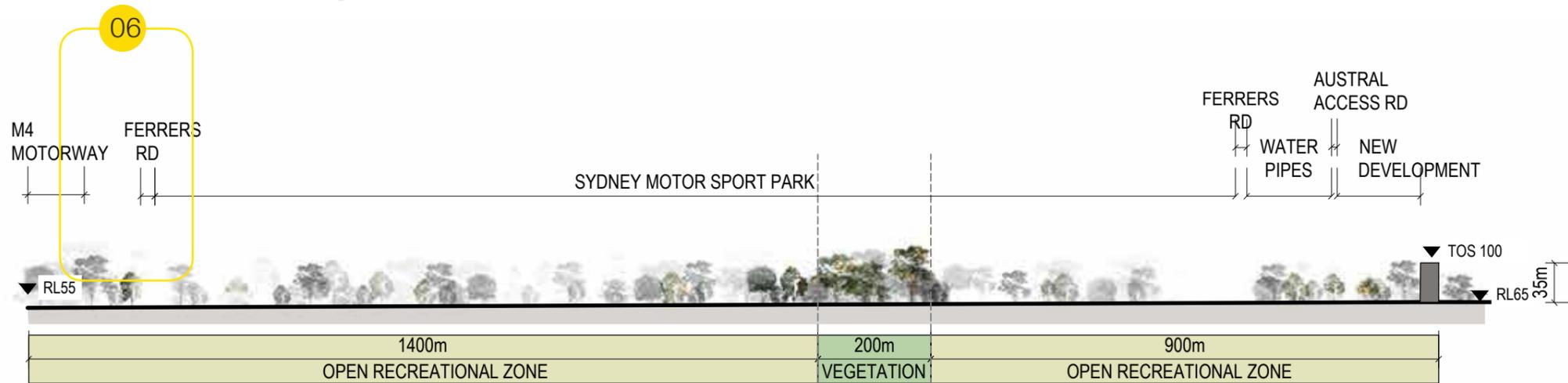
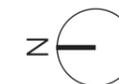
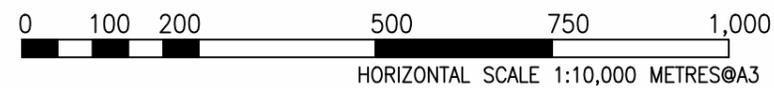


Figure 14- Section 06 - M4 Motorway to the site



VIEW ANGLE 7

Direction and distances

View angle 7 has been taken from Eastern Creek Commercial Zone looking south-east towards the site.

The viewing distance is approximately 2.7km from the site.

View descriptions

View angle 7 was selected due to the slightly higher topography than the proposed site and the Commercial land use.

The view foreground consists of an vacant lot. The middleground consists of a layer of vegetation and the background industrial built form. The section in Figure 14 on the next page demonstrates the topography, layers of vegetation and built form that exist between the viewpoint and the site.

Visual sensitivity

- Viewing Context: Commercial
- Measure of Sensitivity: Low

This view has been assessed as a low level of visual sensitivity due to the predominantly industrial and non-residential use of the area.

Visual magnitude

- Distance from viewer: Mid (2.7km)
- Proposed Development: Industrial, Mid Rise (35m/8 storeys)
- Measure of Magnitude: Moderate

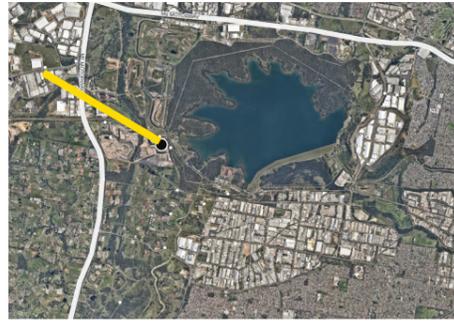
This view has been assessed as a moderate level of magnitude. This measure has been allocated considering that the viewpoint sits slightly higher than the proposed development and some vegetation openings to allow for built form to be viewed in the distance.

Visual impact rating

Moderate-Low



View 7- Eastern Creek Commercial Zone to the site



Section 07

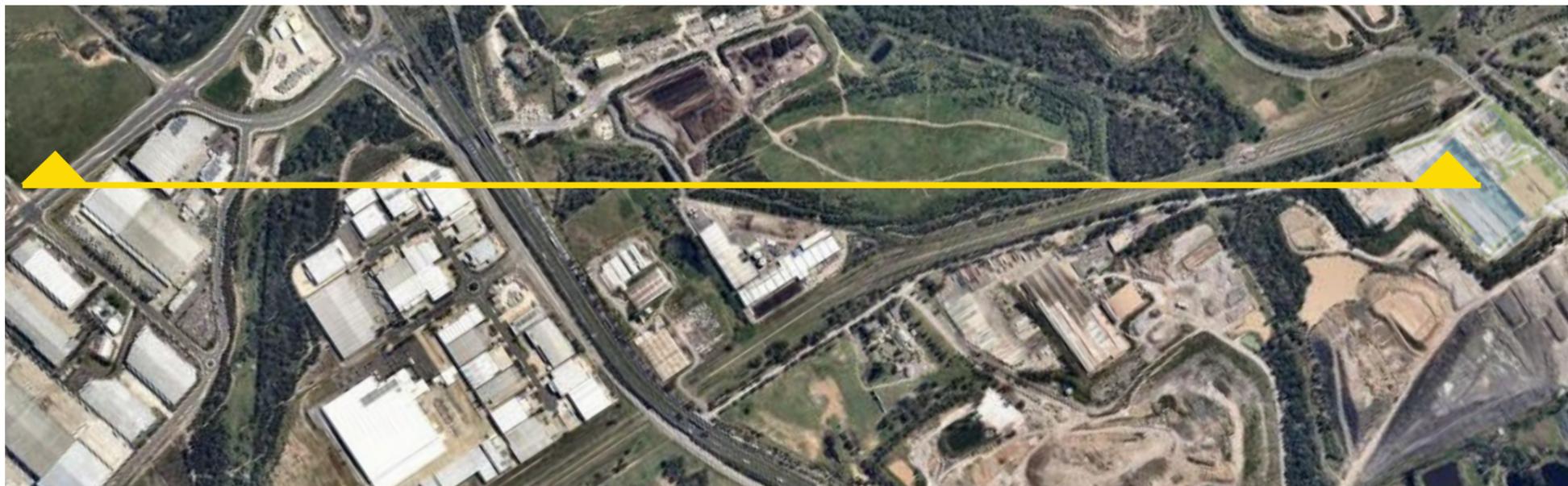
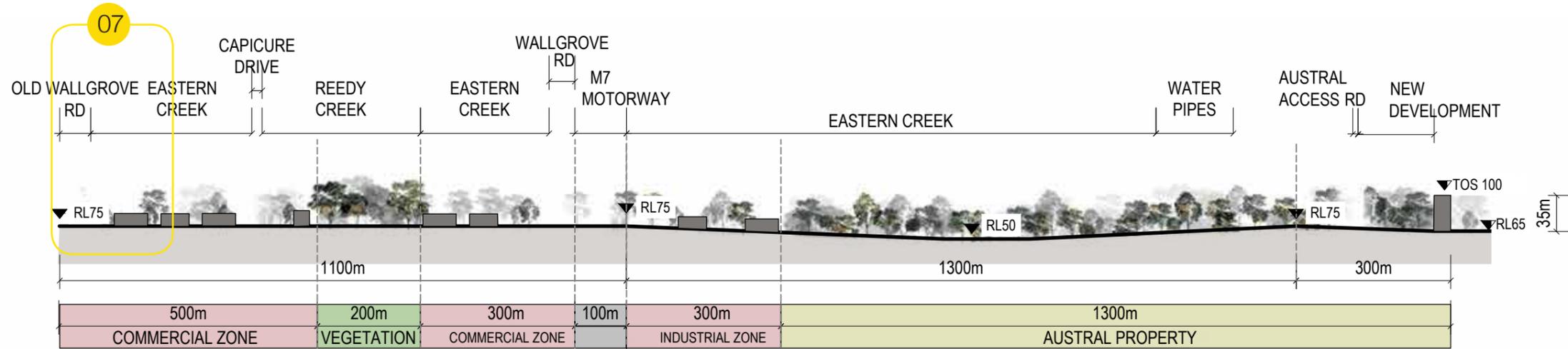
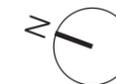
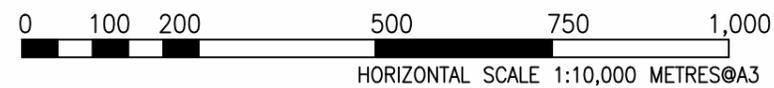


Figure 15 - Section 07 - Eastern Creek Commerical Zone to the site



VIEW ANGLE 8

Direction and distances

Looking west immediately adjacent site from Ferrers Road

View descriptions

View angle 8 was selected due to proximity to the site, demonstrating views from Ferrers Road

The view foreground consists of Ferrers Road verge tree planting looking into the site towards existing buildings, The section in Figure 13 on the next page demonstrates the topography, layers of vegetation and built form that exist between the viewpoint and the site.

Visual sensitivity

- Viewing Context: Agricultural
- Measure of Sensitivity: Moderate

This view has been assessed as a moderate level of visual sensitivity due to the high number of motorists viewing the site from Ferrers Road

Visual magnitude

- Distance from viewer: Immediate
- Proposed Development: Industrial, Mid Rise (35m/8 storeys)
- Measure of Magnitude: High

This view has been assessed as a high level of magnitude. This measure has been allocated considering that the viewpoint is immediately adjacent the site and the proposed upgrade that includes the provision of a stack to 35m high and increased heights to existing buildings will be highly visible to users of Ferrers Road.

Visual impact rating

High -Moderate



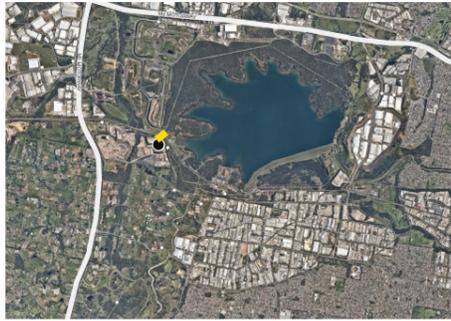
Photomontage



Existing views

View 8- Ferrers Road to the site

Photomontage prepared looking into the site from Ferrers Road, with proposed development superimposed onto photograph.



Section 08

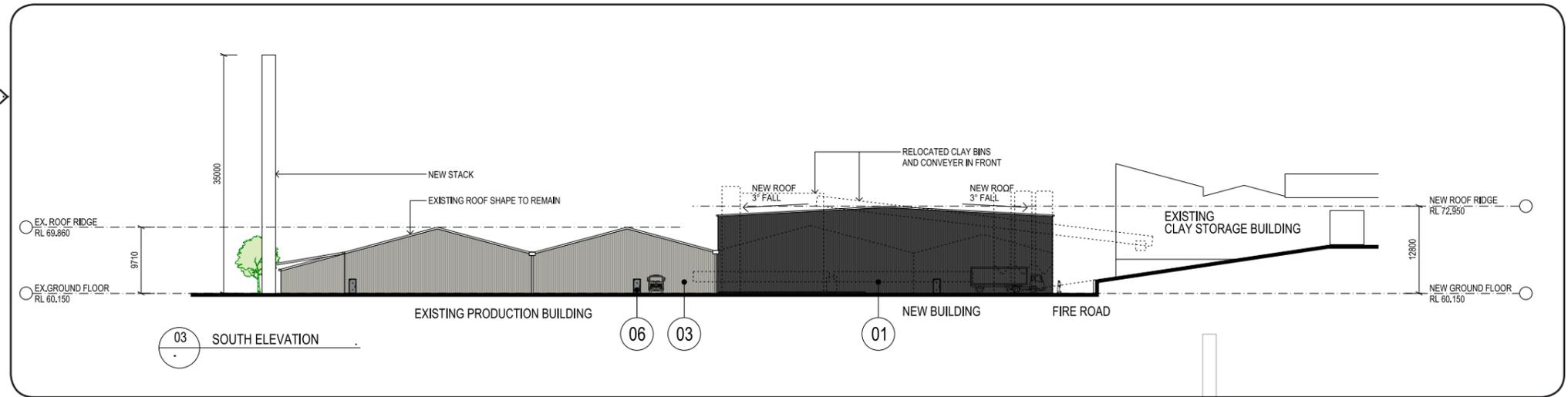
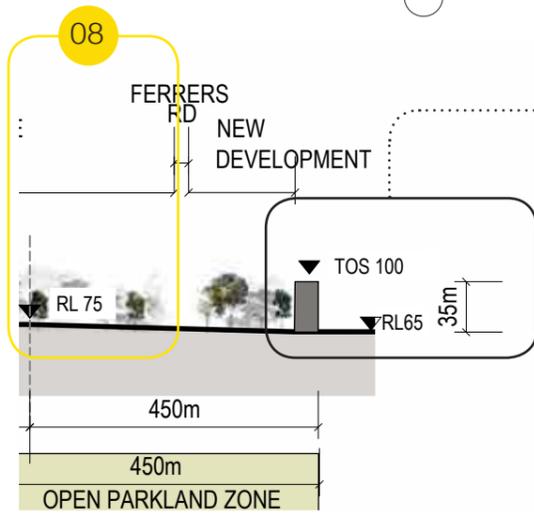
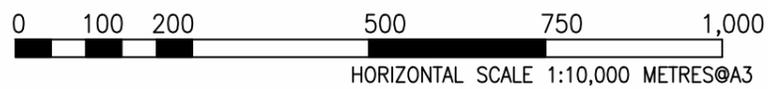
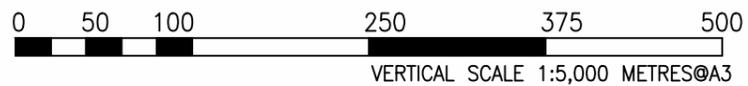


Figure 17 - South Elevation of the Proposed Development (DA201_C by SBA Architects)



Figure 16 - Section 08- Ferrers Road to the site





4.0 CONCLUSION



4.0 CONCLUSION

Visual impacts

The visual impacts of the proposed development at Austral Brickworks from the assessed views ranges from low to moderate. A summary of the assessed view sensitivity is provided in the table below.

VIEWS		
	No.	%
Negligible	2	28.57
Low	1	14.28
Moderate-Low	2	28.57
Moderate	1	14.28
High-Moderate	1	14.28
High	0	0

No viewpoints were identified to suffer from significant (high) visual impacts as a result of the proposed development. It was generally noted that the sites with the highest visual magnitude were generally from less sensitive view receivers such as Industrial and Commercial Zones, with exception to View 2. View 2 is set in a rural residential context in close proximity to the study site.

View 8 has the most significant (High-moderate) visula impact given its proximity immediatly the site along Ferrers Road.

The following explanations were found to be key factors at a number of sites and consistently affected the magnitude ratings generated:

- The proposed development is at most commonly screened by topography or established vegetation
- Viewpoint character and context is not sensitive to the view of the proposed development due to being predominantly from Industrial and Commerical Zones
- Viewing distances are long and thus the development is difficult to distinguish or is viewed within a much larger overall context

