URBIS

754-770 AND 784-786 MAMRE ROAD, KEMPS CREEK

URBAN DESIGN AND VISUAL ASSESSMENT REPORT

PREPARED FOR

THE GPT GROUP

3 JUNE 2021

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Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

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INTRODUCTION

PURPOSE OF THIS REPORT

Urbis has been engaged by the GPT Group to prepare an Urban Design and Visual Assessment Report for the site at 754-770 and 784-786 Mamre Road, Kemps Creek (Subject Site), as part of the Secretary's Environmental Assessment Requirements (SEARs) for a State Significant Development Application (SSDA).

GPT Group prepared a concept master plan for an Industrial Estate at the subject site in early 2020. As part of GPT Group's submission of an Environmental Impact Statement (EIS), SEARs were issued in November 2020. The SEARs state the requirement for GPT Group to address specific matters in relation to urban design and key visual issues.

The site sits within the Mamre Road Precinct, a recently rezoned precinct within the Western Sydney Employment Area, and is located within the Penrith Local Government Area (LGA). As such, the concept master plan will need to comply with the State Environmental Planning Policy (Western Sydney Employment Area) 2009 (WSEA SEPP) and design with respect to the Draft Mamre Road Development Control Plan 2020 (DCP).

This report addresses the requirements of the SEARs, in relation to key issues for urban design and visual assessment. For ease of reference, this report is structured into three sections:

Part A: Urban and Visual Context Analysis
This section provides an analysis of the site's urban and visual context, identifying the site's opportunities and constraints in consideration of the current and emerging Mamre Road Precinct context.

Part B: Urban Design Review
This section reviews the concept master plan options for the site and considers Part A investigation and Clause 31 Design Principles of WSEA SEPP 2009 in recommending the preferred concept master plan.

Part C: Visual Assessment
Provides a review of the likely visual impacts of the proposed development on other private landowners in the vicinity and key vantage points in the public domain, with consideration of the landscape character, key landscape features and visual sensitive location within the Mamre Road Precinct and Penrith LGA.

PROJECT LOCATION

The site is located at 754-770 and 784-786 Mamre Road, Kemps Creek, legally described as Lot 59 and Lot 60 in DP 259135.

The site has a total area of approximately 33.1ha and a western frontage of 211m along Mamre Road. Mamre Road provides access to the site and connects with the M4 Motorway to the north and Elizabeth Drive to the south.

The site is situated in the Mamre Road Precinct, within the Western Sydney Employment Area (WSEA). As part of the rezoning of Mamre Road Precinct in June 2020, the site was predominantly rezoned as IN1 General Industrial, and includes some areas of 2nd order streams with limited ecological value (e.g. creek corridors) that are rezoned as E2 Environmental Conservation.

The site sits adjacent to Mamre Road Precinct's ridgeline, with an east-west ridgeline traversing the site's north-eastern boundary. The site is undulating in character with land sloping down towards the west and south, forming a creek corridor that transverses from the south-west to east-west of the site.

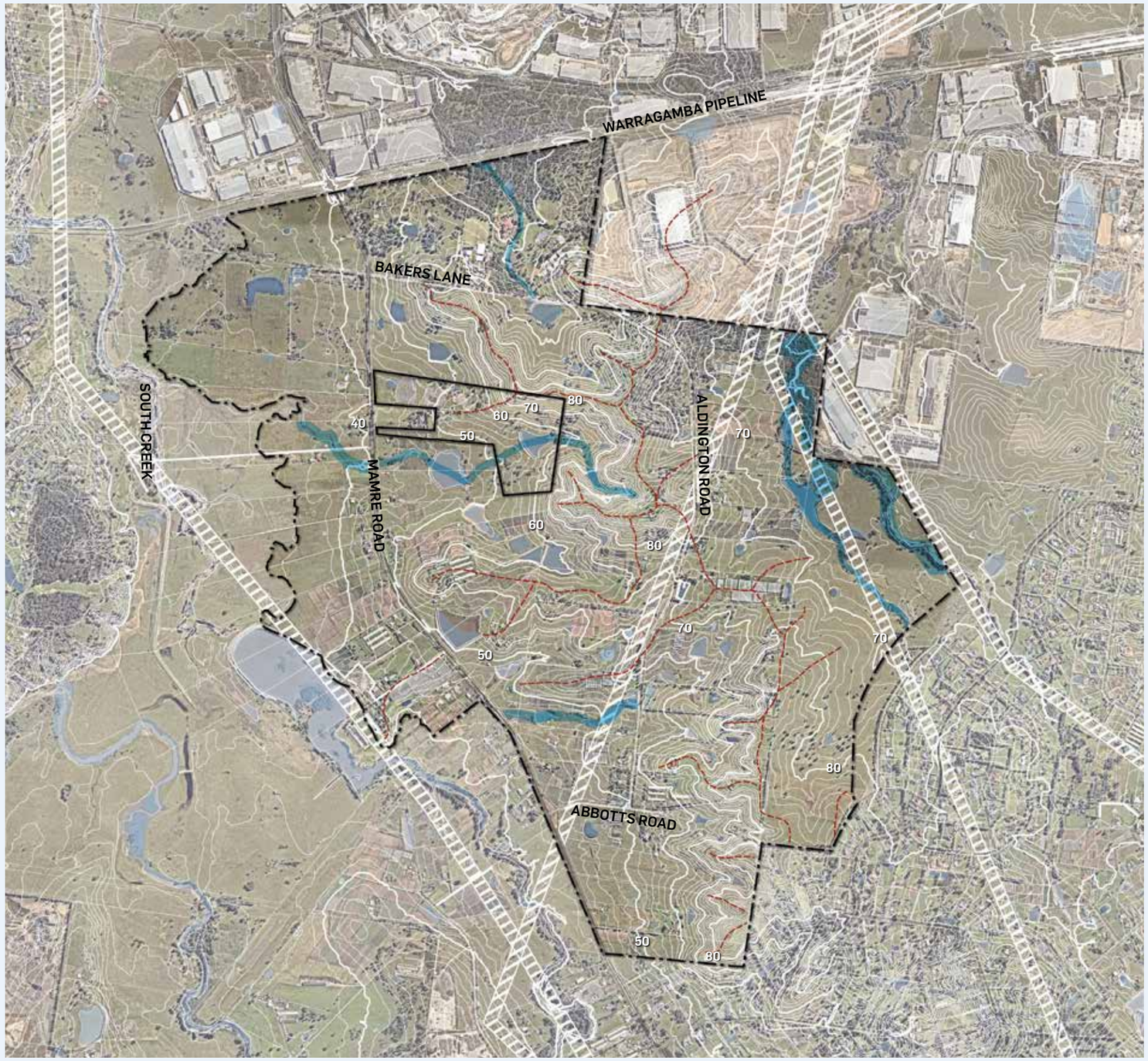

Figure 1 Site Location

PROJECT DESCRIPTION

The Concept Master Plan for the site at 754-770 and 784-786 Mamre Road, Kemps Creek comprises of five (5) industrial warehouses, with a total warehouse and office floorspace of 151,125m² (GFA).

The below table provides an overview of the indicative yield planned for the site.

		Area (m²)
	TOTAL SITE AREA	**331,433**
	DEVELOPABLE AREA	**290,516**
		88 %
CONCEPT MASTER PLAN		
	Road Reserves	20,594
	E2 Zone (25m)	9,697
	Temporary Access Road	10,626
	Total Warehouse Floorspace, GFA	151,125
	Total Office Floorspace, GFA	6,735
	TOTAL GFA	**157,860**
	SITE COVERAGE	**54 %**

The Concept Master Plan will be delivered in two stages, with **Stage 1** comprising the construction of **Warehouse 1 and 3** at the north-east corner of the site. This warehouse will support the use of other manufacturing industries and/or warehouse and distribution centres, which will operate 24 hours/day, seven days/week.

Other warehouse buildings will be delivered in Stage 2, subject to separate development applications.

Figure 2 SSDA Estate Master Plan - Yiribana Logistic Estate (22 April 2021)

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PART A
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VISUAL ANALYSIS

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VISUAL IMPACT ASSESSMENT

PART A

URBAN AND VISUAL CONTEXT ANALYSIS

Part A analyse the urban and visual context of the site, within the current context and the emerging Mamre Road Precinct context.

This section sets out:

- the planning context of the site;
- series of opportunities and constraints at the site by the following themes:
  - Landform & Topography
  - Access & Movement
  - Waterways & Flooding
  - Biodiversity & Creek Corridor
  - Indigenous & European Heritage
  - Land Ownership, Uses and Emerging Development
  - Landscape Character and Visual Context
- the existing visual character of the site and surrounds, including the site's visual catchment;
- the site's consolidated constraints; and
- a series of key directions to inform the site's concept plan design.

A.1 STRATEGIC AND STATUTORY PLANNING CONTEXT

Urbis has undertaken a high level review of the strategic plans and policies, and statutory frameworks implemented by Department of Planning, Industry and Environment (DPIE), Greater Sydney Commission (GSC), and Penrith City Council.

These include:

- A Metropolis of Three Cities: Greater Sydney Region Plan 2018 (GSC)
- Western City District Plan 2018 (GSC)
- Penrith Local Strategic Planning Statement 2020
- Western Sydney Aerotropolis Plan 2020
- Western Sydney Employment Area (WSEA) 2009 Amendment
- Mamre Road Structure Plan 2020
- Draft Mamre Road Development Control Plan (DCP) 2020
- Penrith LEP 2010
- Penrith DCP 2014
- Penrith Landscape Character Strategy 2006
- Cooling the City Strategy 2015

KEY INSIGHTS:

WSEA (SEPP) 2009 (gazetted on June 2020) and the Draft Mamre Road Precinct DCP 2020 are two key environment planning instruments governing development on site.

Nonetheless, the analysis of the site's urban and visual context have regard to the overall objectives and principles set out under the Penrith Landscape Character Strategy 2006, Penrith LEP 2010 and Penrith DCP 2014.

The change in land use zone to IN1 is such that, a significant level of visual change is anticipated under the SEPP, which will impact on some views that include rural backdrops and access to pastoral landscapes and settings of scenic quality.

Future development on-site should maintain and enhance the landscape and scenic quality of Mamre Road Precinct and the broader Penrith LGA.

The Concept Master Plan should adopt following strategies to:

- Mitigate visual impacts on sensitive views of pastoral landscapes and areas of high scenic quality; and
- **Mitigate urban heat island effect, by**
  - Supporting the delivery of green infrastructure, e.g. dedicated pedestrian and cycle network;
  - Implement WSUD principles in the landscape design, particularly around riparian corridors and area that is environmentally sensitive;
  - Careful use of materiality in paving or building facade to increase reflectivity/albedo;
  - Meet Greater Sydney Region Plan's tree canopy target of 40%.

The following pages document the most recent and applicable strategic directions and policies to the site and future concept master plan.

A.1.1 WESTERN SYDNEY EMPLOYMENT AREA (WSEA) SEPP 2009

WSEA SEPP was gazetted on June 2020 in support of Mamre Road Precinct rezoning. It is the primary environmental planning instrument governing development on the site. As part of the Precinct's rezoning, the site has been rezoned to support the delivery of industrial lands. This aligns with the strategic direction for the site.

Section 31 Design Principles

Part 6, Section 31 of the WSEA SEPP 2009 sets out four key design principles the consent authority must take into consideration when assessing development application for the site. These include:

(a) the development is of a high quality design, and

(b) a variety of materials and external finishes for the external facades are incorporated, and

(c) high quality landscaping is provided, and

(d) the scale and character of the development is compatible with other employment-generating development in the precinct concerned.

These four principles set the basis for the Urban Design Review of the Concept Plan proposed on-site.

LEGEND

Site Boundary

Western Sydney Employment Area (WSEA) SEPP 2009

RE1 Public Recreation

RU2 Rural Landscape

SP2 Infrastructure

Mamre Road is recognised as a the key transport corridor r servicing Mamre Road Precinct and the broader Western Sydney Employment Area.

E2 Environmental Conservation

Approximately 4% of the site (14,280m²) is zoned as E2 Environmental Conservation. This represents the 20m creek corridor that transverses from the south-west to south-east of the site. The Mamre Road Rezoning package has supported flexibility of the E2 zones' location across the Precinct.

IN1 General Industrial

A total of 31.7ha (96%) of the site is zoned as IN1 General Industrial.

A.1.2 PENRITH COOLING THE CITY STRATEGY 2015

Penrith City Council recognises the growing challenge of urban heat island effect in Penrith LGA. The Cooling the City Strategy 2015 seeks to identify strategies to cool the City and region in a way that improves liveability and prioritises protection from heat for people and communities.

The strategies can be broadly categorised as:

- Green Infrastructure
- Water Sensitive Urban Design (WSUD)
- Increased Albedo/ Reflectivity
- Policy & Planning
- Community Engagement

A.2 LOCAL PLANNING CONTEXT

A.2.1 DRAFT MAMRE ROAD PRECINCT DEVELOPMENT CONTROL PLAN (NOV 2020)

The Draft Mamre Road Precinct DCP 2020 has been prepared to set out additional objectives, controls and guidance for future development and applications in the Mamre Road Precinct.

Mamre Road Precinct is recognised as one of the precincts within the Western Sydney Aerotropolis (WSA). The Precinct is located at the north-east corner of WSA, at the immediate east of Wianamatta-South Creek Corridor (Map 1).

Mamre Road Structure Plan is proposed to support the Precinct Vision:

The Mamre Road Precinct will be a world-class industrial area, primarily catering for warehousing and logistics and forming an extension of the Western Sydney Employment Area. Larger consolidated land parcels will facilitate the development of these uses. A flexible zoning and land use controls will also allow other smaller industrial, manufacturing, commercial and clean industrial uses to locate here. Smaller industrial and urban services uses are encouraged throughout the Precinct, and particularly in transition areas, where the industrial area adjoins rural-residential properties.

Biodiversity and Riparian Network

The Structure Plan has identified an east-west environmental conservation corridor traversing across the site, with a transition zone indicated around the corridor (Map 2). This corridor comprises of 2nd order streams (Map 3).

Heritage

The presence of the creek corridor at the site indicates that the site has areas of high and moderate-high Aboriginal Potential (Map 4). However, as shown in Map 5, there is no European Heritage Items identified within the site.

Significant Landscape Features and View Corridors

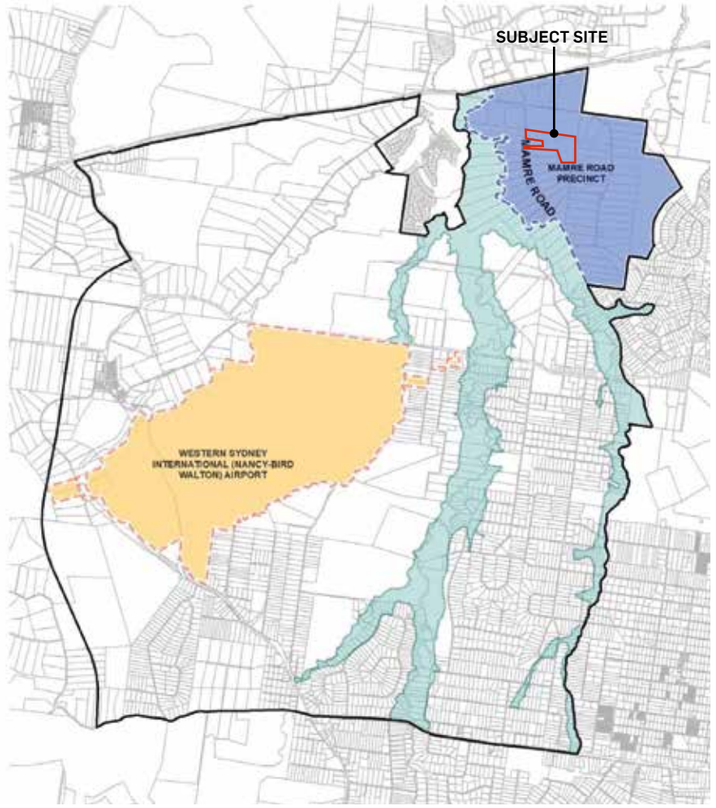
The site sits below the precinct ridgeline, with an east-west ridgeline transversing the north-east boundary of the site. Ten (10) east-west view corridors have been identified across Mamre Road Precinct. This is mainly to create landscape and visual connection between Wianamatta-South Creek at the west and Ropes Creek along the eastern boundary of Mamre Road Precinct. One of the east-west view corridors transverses the southern part of the site along the creek corridor (Map 6).

Access and Movement

Mamre Road is the main arterial road servicing the Precinct (Map 7). The site will gain access off the future High Order Road that transverses from the central north to south of the site.

A dedicated freight network has been identified for the Precinct (Map 8). This network is planned to travel along the northern and eastern boundary of the site, connecting traffic from Bakers Lane at the north to the high order roads and local industrial roads at the south.

The opposite diagrams investigate the current context of the site within Mamre Road Precinct, in relation to the emerging future context under the Draft DCP 2020, and is described in detail in pages 10-18.

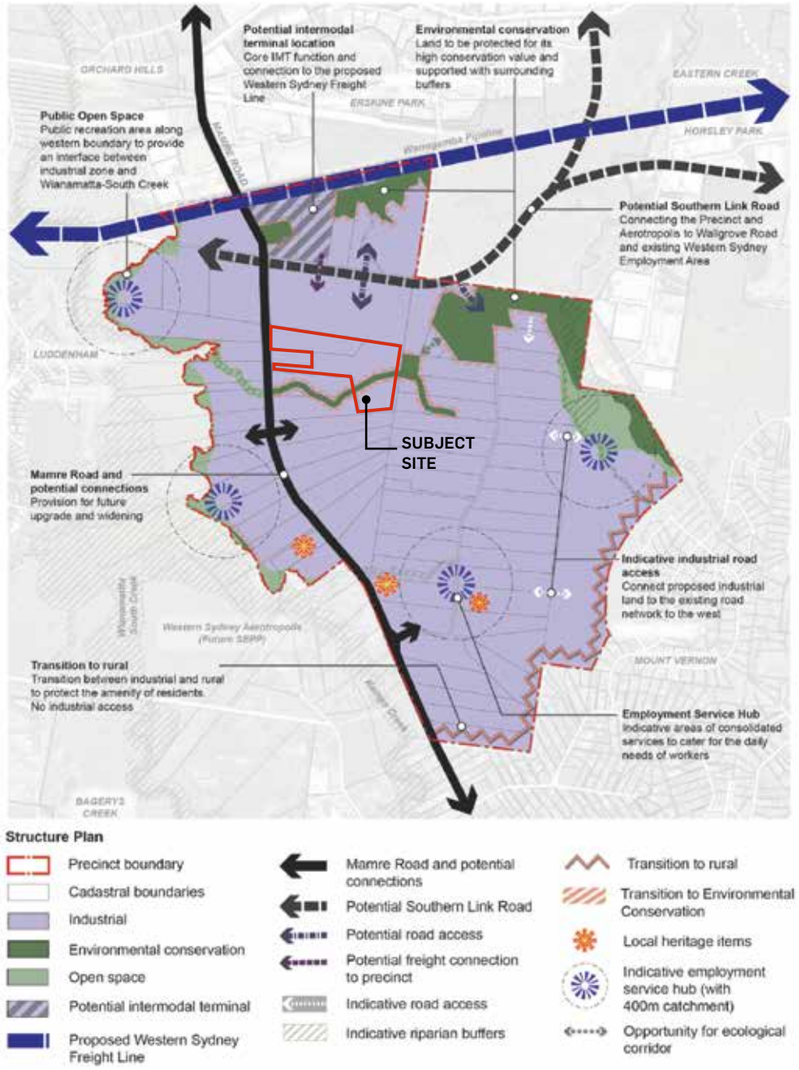


Map 1. Mamre Road Precinct Locational Plan

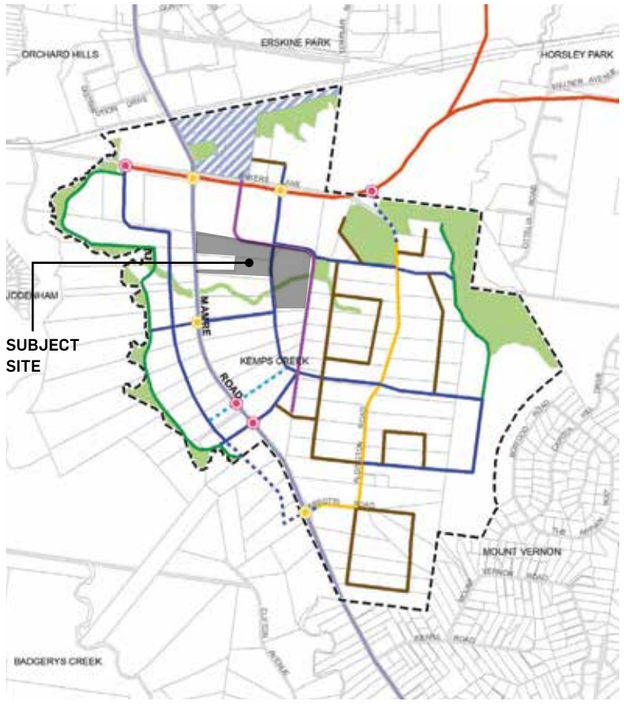
KEY INSIGHTS:

Mamre Road Precinct is recognised as part of the broader precinct planning boundary for Western Sydney Aerotropolis. However, it does not form part of the Western Sydney Aerotropolis SEPP 2020.

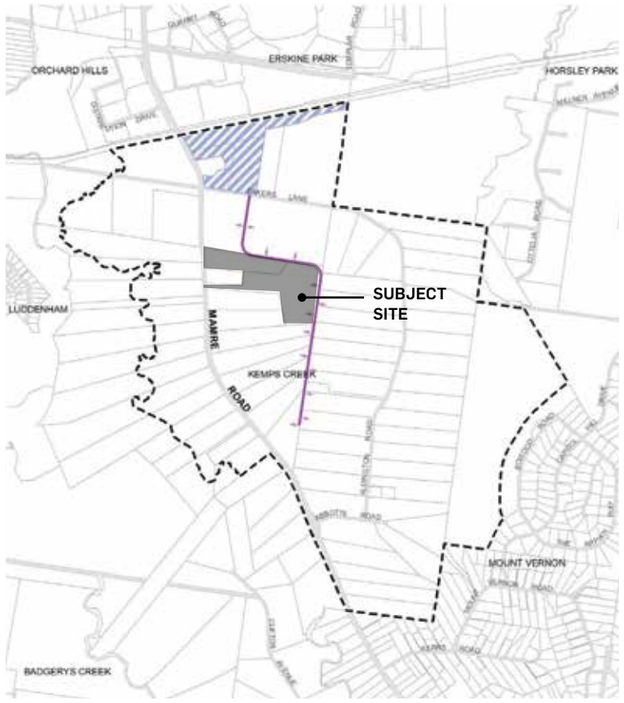
The subject site, located within Mamre Road Precinct, is governed by the Western Sydney Employment Area SEPP 2009, and guided by the Draft Mamre Road Precinct DCP 2020.



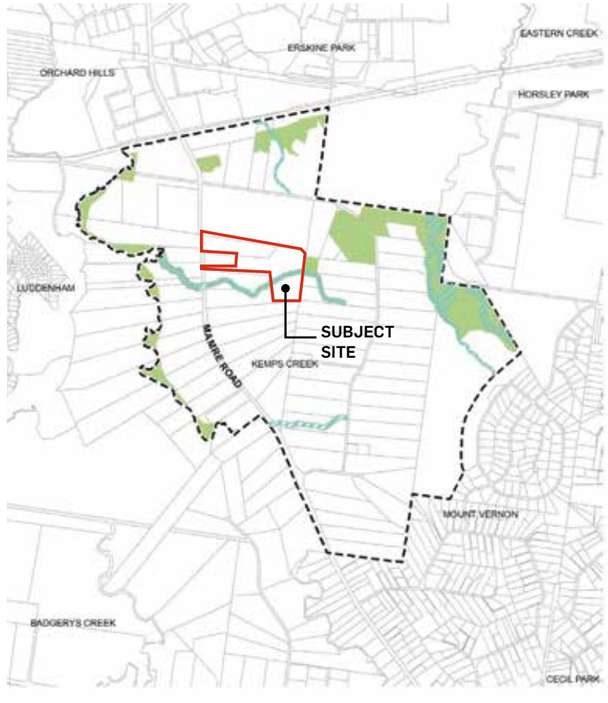
Map 2. Mamre Road Precinct Structure Plan



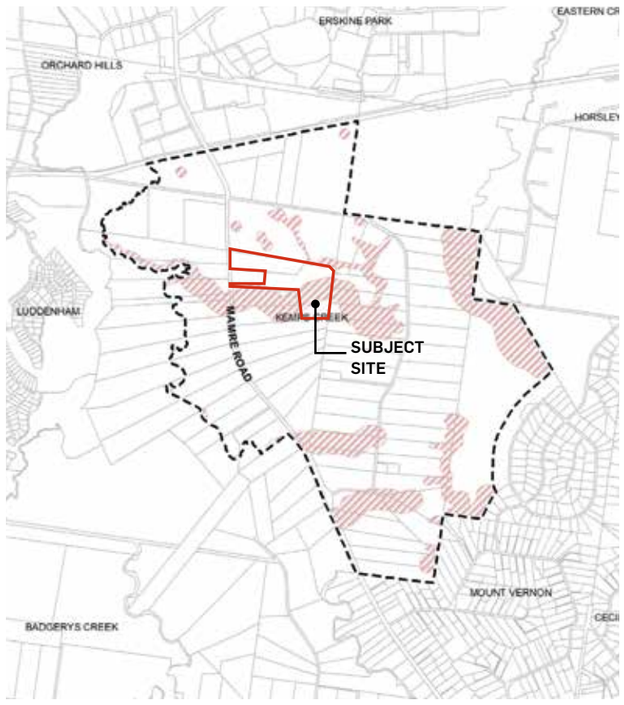
Map 3. Mamre Road Precinct Road Network
(Refer to Page Section A.4, pg.12)



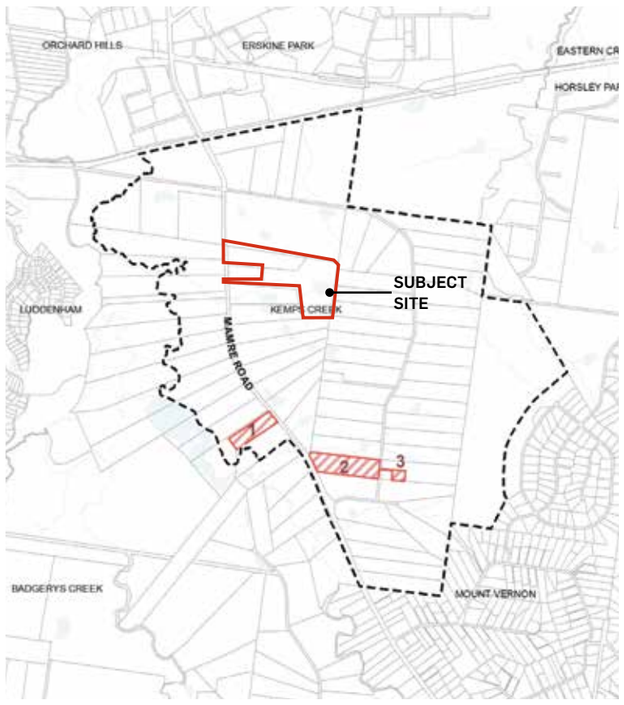
Map 4. Integrated Freight Network
(Refer to Page Section A.4, pg.12)



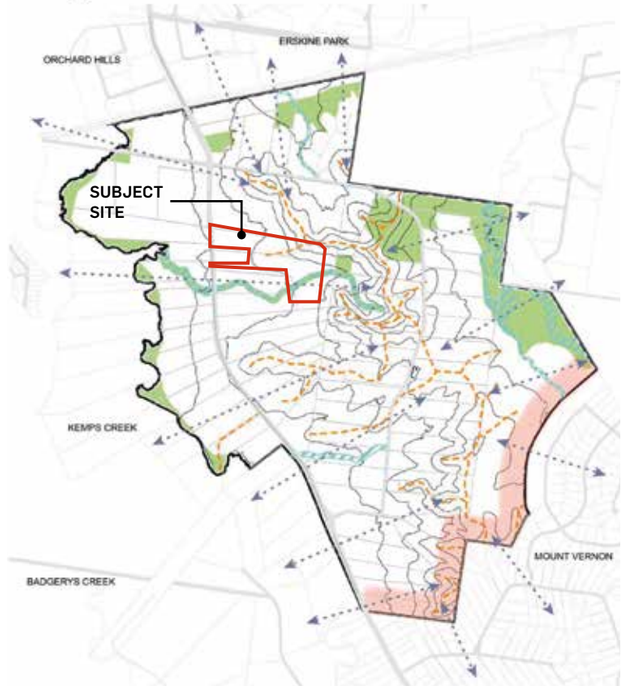
Map 5. Biodiversity Areas and Riparian Network
(Refer to Page Section A.6, pg.14)



Map 6. Aboriginal Heritage
(Refer to Page Section A.7, pg.15)



Map 7. Heritage Items listed under WSEA SEPP
(Refer to Page Section A.7, pg.15)



Map 8. Landscape Features and Visually Sensitive Locations
(Refer to Page Section A.9, pg.18)

A.3 LANDFORM & TOPOGRAPHY

TOPOGRAPHIC FEATURES

Mamre Road Precinct features a central ridgeline that transverses north to south of the precinct. This portion of land has the greatest level of slope. The eastern and western portion of the precinct, including the site, is rather undulating.

The site comprises following landform and topographic features within Mamre Road Precinct:

IMPLICATIONS OF DRAFT MAMRE ROAD PRECINCT DCP (NOV 2020)

Precinct Ridgelines

The site nestles within the western side of the Mamre Road Precinct's north south ridgeline. There is also a low ridge that fringes north west to the centre of the site creating a rolling landscape ridgelines views from the Mamre Road.

The Draft DCP conforms that the future buildings should not be sited on ridgelines, with lower building heights around ridgelines.

High Points

The Precinct encompasses an area known as Mount Vernon and includes a prominent hill line that divides the Precinct with approximately one third draining east to Ropes Creek, one third to the main dam on Kemps Creek and one third below the Kemps Creek and Wianamatta South Creek confluence

The site is has one local high point located on the northern east part of the site.

125
20

Elevation

The precinct has an elevation from RL 20 at the to RL 125.

The site slopes down from the north eastern end (at RL82) towards the south (at RL66) and west with the lowest point at RL42 being the ones along Mamre Road and the gully.

KEY DIRECTIONS FOR CONCEPT PLAN:

- Consider the site's extent of visibility from Mamre Road, given the rise in elevation from the west to the east.
- Building height will need to respond to the north-south ridgeline. Future buildings should not obstruct view sights of the ridgeline.

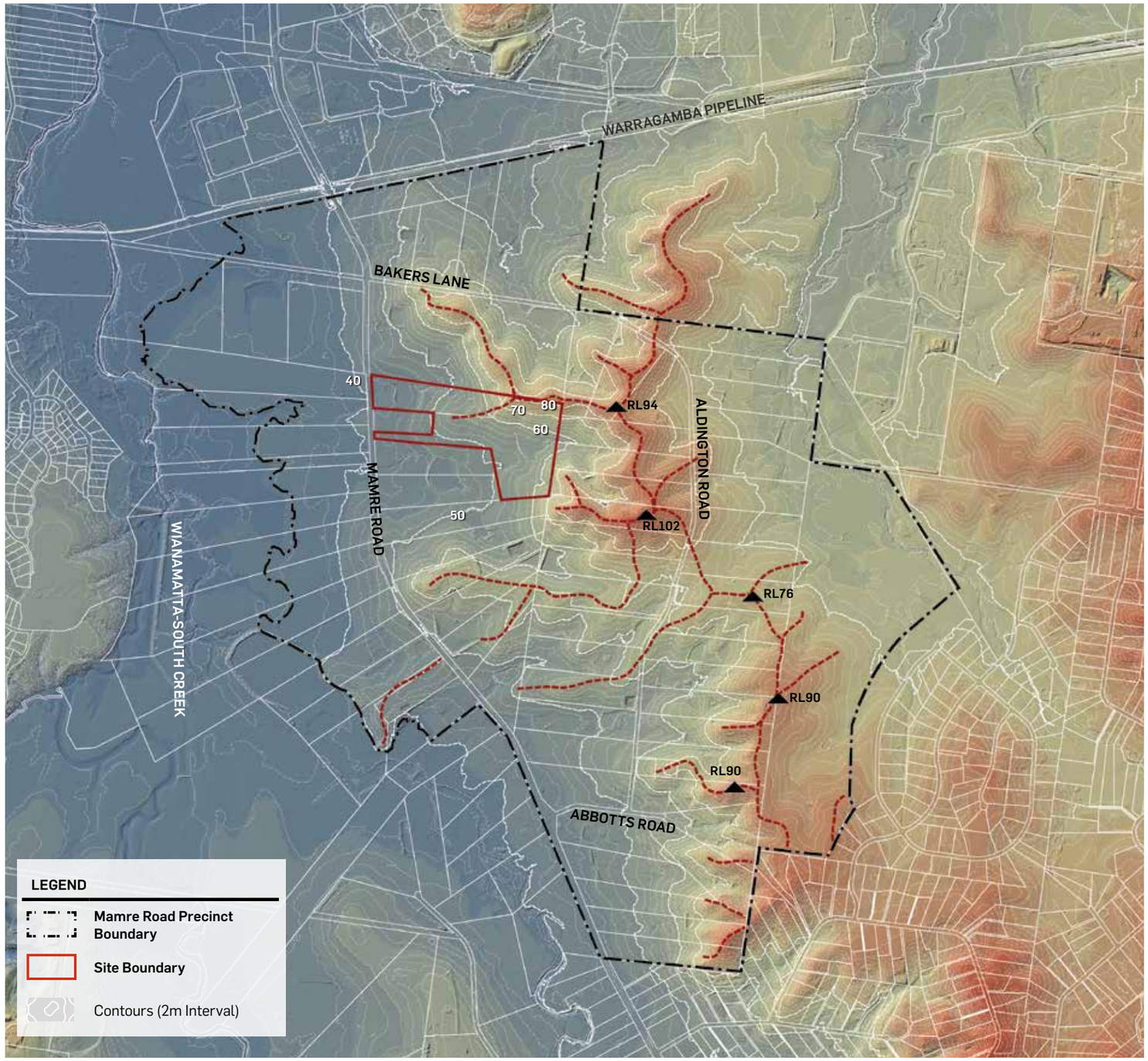


Figure 3 Mamre Road Precinct's Elevation Analysis

SLOPE ANALYSIS

The slope analysis mapping shows that the western and south-western parts of the site are relatively low and flat which increases the extent of the potential visual catchment in these directions and therefore the likeliness of external visibility of the built forms proposed.

IMPLICATION OF MAMRE ROAD PRECINCT SLOPE GRADIENT

- **<5%**
- **5-10%**
- **10-15%**
- **15-18%**
- **>18%**

The north-east corner of the site has the greatest level of steepness. Future development at this location will require significant earthwork, and should be avoided to reduce obstruction to the ridgeline.

KEY DIRECTIONS FOR CONCEPT PLAN:

- Location and orientation of building will need to consider the slope gradient. Development on sloped land with greater than 15% will involve significant earthwork and construction cost.

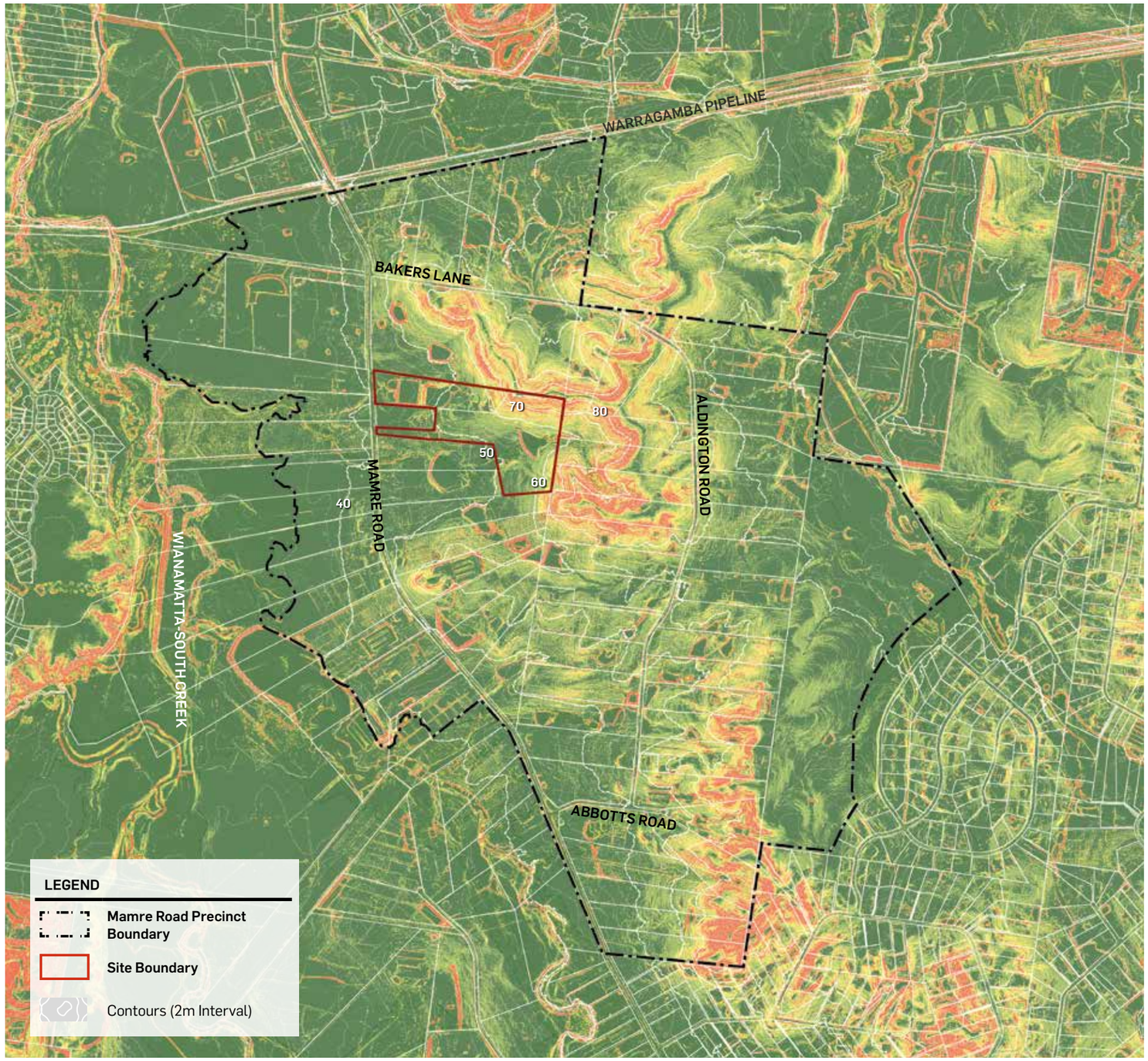


Figure 4 Mamre Road Precinct's Slope Analysis

A.4 ACCESS & MOVEMENT

Mamre Road Precinct is predominantly served by Mamre Road, Bakers Lane and Aldington Road. Mamre Road, in particular, provides immediate access to the site and Bakers Lane supports the secondary access to the site through two new north-south connections, being a high order road and a dedicated freight network that travels along the north-east and eastern boundary of the site.

IMPLICATIONS OF DRAFT MAMRE ROAD PRECINCT DCP (NOV 2020)

Arterial Road

Mamre Road is located at the western boundary of the site. As an arterial road, it serves as the movement corridor connecting north-south. It connects the site to the broader Mamre Road Precinct and the immediate context, being Mount Vernon, Orchard Hills and Erskine Park.

Southern Link Road (Bakers Lane)

The Southern Link Road will serve as the arterial road moving the east-west corridor. It is located north to the site and will be connected to the site via the freight and road network.

Dedicated Freight Network

The dedicate freight network will provide access from the intermodal terminal to surrounding industrial precincts and individual warehouses/distribution centres. This network runs along the northern and eastern boundary of the site. The DCP proposed a 10m road reserve for this Freight Network.

Potential intermodal terminal

Land identified for the intermodal facility is to be integrated with a dedicated road freight network to the south, via a dedicated crossing of future Southern Link Road.

High Order Roads

The road network proposed on site runs north south connecting the site to the Bakers Lane and Aldington Road. The DCP has not stated a minimum road reserve for the High Order Roads.

Signalised intersection

Potential Signalised intersection

Distributor Road

Aldington Road will continue to serve the Precinct as a Distributor Road (or Collector Road), with a road reserve of 26.5m.

Open Space Edge Road

Potential Road Connections

Optional Alternate Road Access (to be investigated)

Indicative Local Industrial Road (Secondary Internal Road Network)

The local industrial roads are typically with a road reserve of 24m, with a road carriageway of 15m.

KEY DIRECTIONS FOR CONCEPT PLAN:

- A new north-south road corridor is to be provided, with a minimum road reserve of 24m, to support traffic connection from the Southern Link Road to local industrial roads.

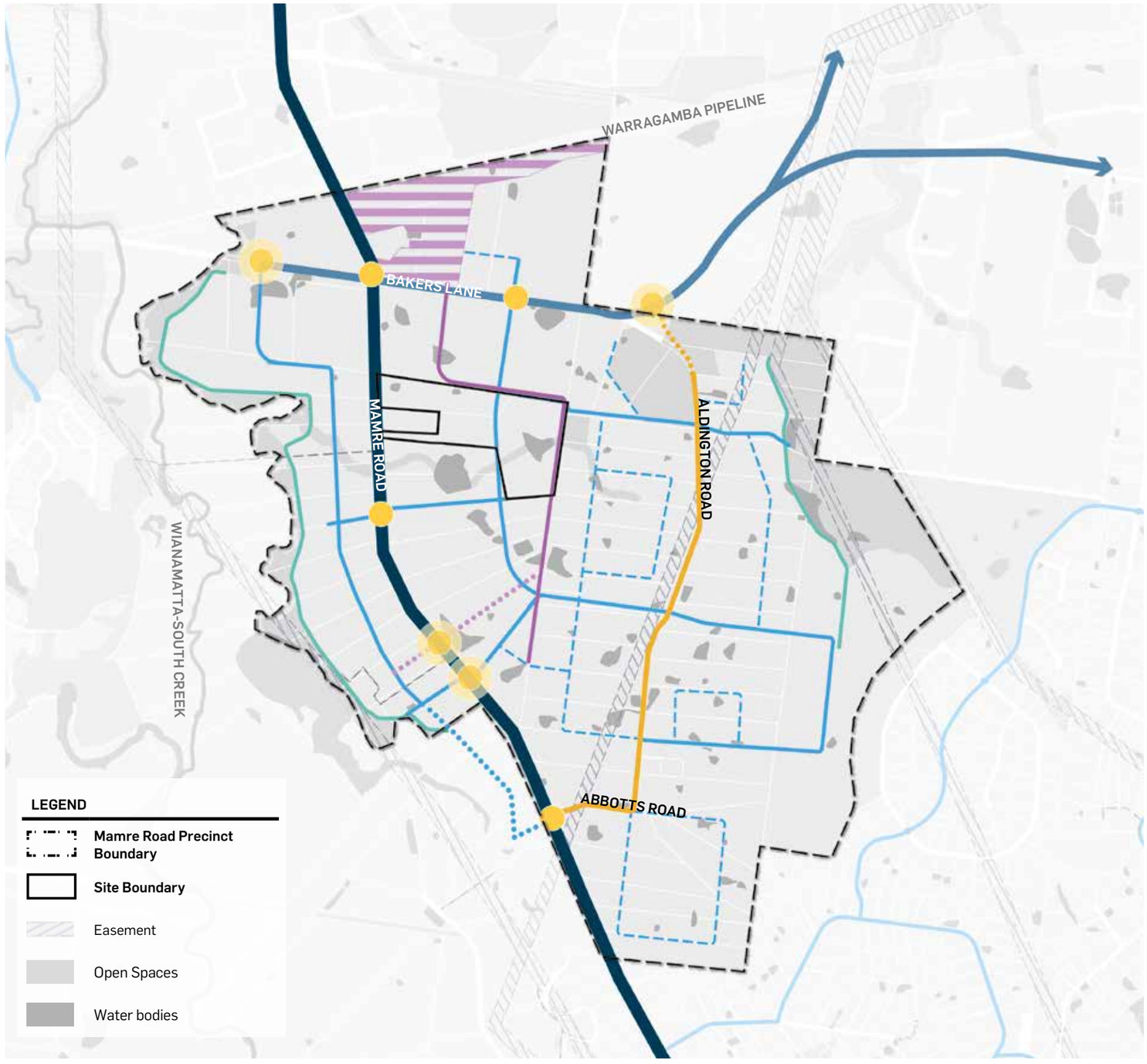


Figure 5 Mamre Road Precinct's Access and Movement Plan

A.5 WATERWAYS & FLOODING

Mamre Road Precinct has low flood risk, with flooding only occurring around existing riparian corridors and creeklines. The flood mapping shows that the site has flood prone land at the north-west corner (at the site's lowest point), and along the east-west creek corridor.

EXISTING CONTEXT

Water bodies

Flooding (100 year ARI)

The site is affected by flooding due to the existing watercourse and dams on the eastern part of the site.

IMPLICATIONS OF DRAFT MAMRE ROAD PRECINCT DCP (NOV 2020)

Riparian Corridors

Based on '*Appendix F - Riparian Corridor Management Plan*', the Field inspection of Unnamed Trib South Creek 2 validated the presence of a 2nd order watercourse. This tributary runs on the eastern part of the site has minimal ecological value due to lack of native riparian vegetation and significant alteration of flow paths.

However the emergent lower tributary running to the west of the site has a greater biodiversity value, including wetland vegetation and large native trees present around all dams which provide habitat value for native fauna.

KEY DIRECTIONS FOR CONCEPT PLAN:

- Carefully investigate area with vegetation cluster along the creek corridor to ensure high biodiversity value will be protected.
- Whilst the WSEA SEPP 2009 supports flexibility in the relocation of the creek corridor, area with biodiversity value evident should be protected.
- Adopt a water management strategy to mitigate potential flooding.

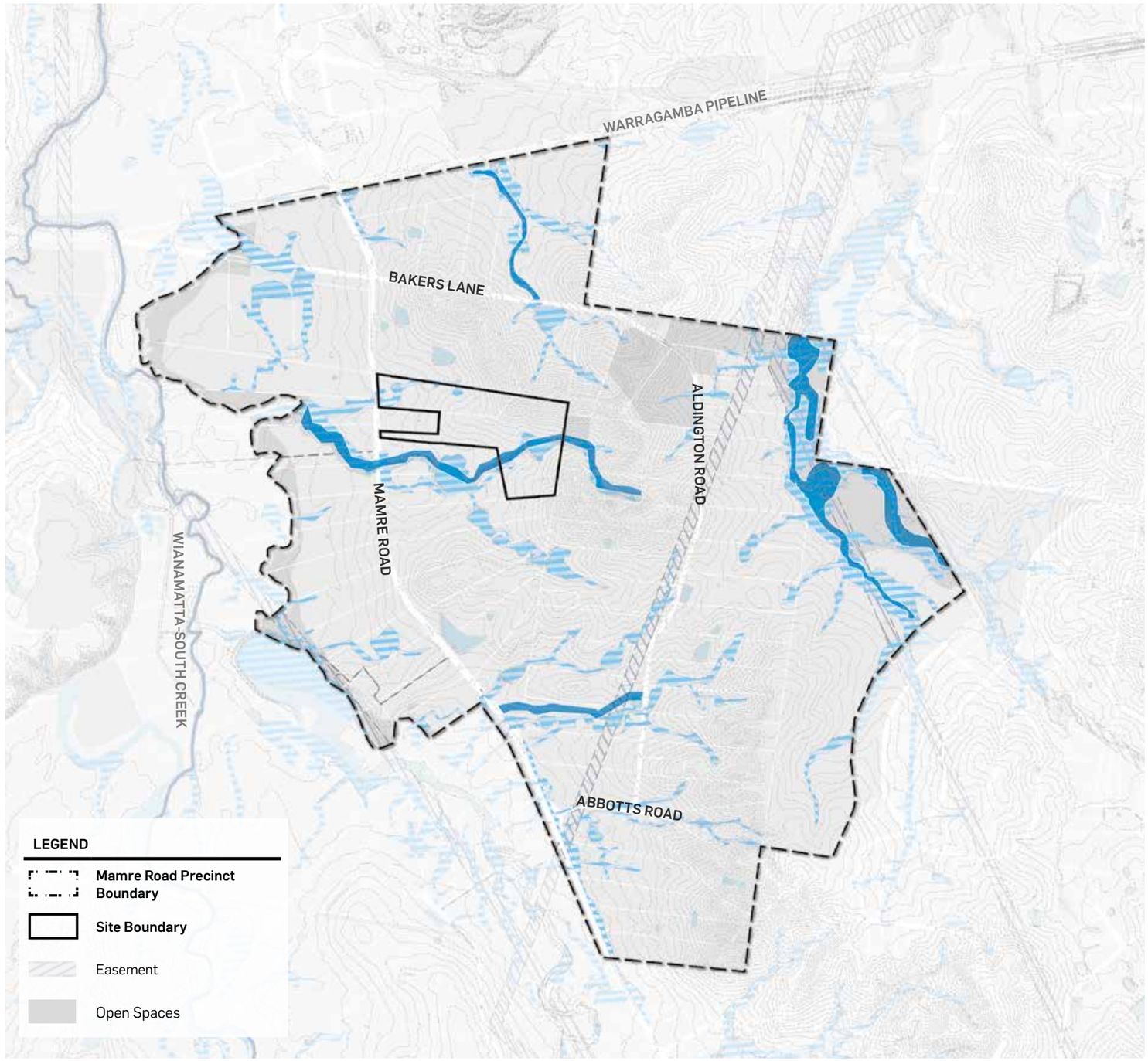


Figure 6 Mamre Road Precinct's Waterway Features & Flood Planning

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A.6 BIODIVERSITY & CREEK CORRIDORS

Mamre Road Precinct sits between two major north-south biodiversity corridors, with Wianamatta-South Creek at the west, and Ropes Creek at the east. This has led to the presence of areas with high value biodiversity along the site's western boundary and eastern boundary.

Whilst the site has no areas of high value biodiversity mapped, the creek corridor has shown to be a key biodiversity link, providing a continuous biodiversity link from Wianamatta- South Creek at the west to Ropes Creek at the east.

EXISTING CONTEXT

Open Space

Terrestrial Biodiversity

IMPLICATIONS OF DRAFT MAMRE ROAD PRECINCT DCP (NOV 2020)

Areas of High Value Biodiversity

There is no areas of high value biodiversity identified within the site.

Riparian Corridors

The east-west creek corridor that transverses the site is a key riparian biodiversity system linking remnant vegetation across the Precinct. As noted on Page 13, the eastern part of the corridor has minimal ecological value, while the western section of the creek corridor shown to have greater biodiversity value, with the presence of wetland vegetation and large native trees.

An approval of Natural Resources and Assessment Regulator (NRAR) is to be obtained for any removal of native vegetation within this creek corridor, and if there's any modification to a natural (or historic) waterbody in its dimensions, depth or bank heights.

Future development on-site is to provide green vegetated landscape setback or a public road to this corridor. This landscape buffer should generally be vegetated with endemic tree species and shrubs.

KEY DIRECTIONS FOR CONCEPT PLAN:

- A vegetated landscape setback or public road is to be provided along the corridor.
- Whilst the WSEA SEPP 2009 enables flexibility in relocating the E2 Corridor within the site, any modification to a field-validated natural (or historic) waterbody still requires NRAR approval.

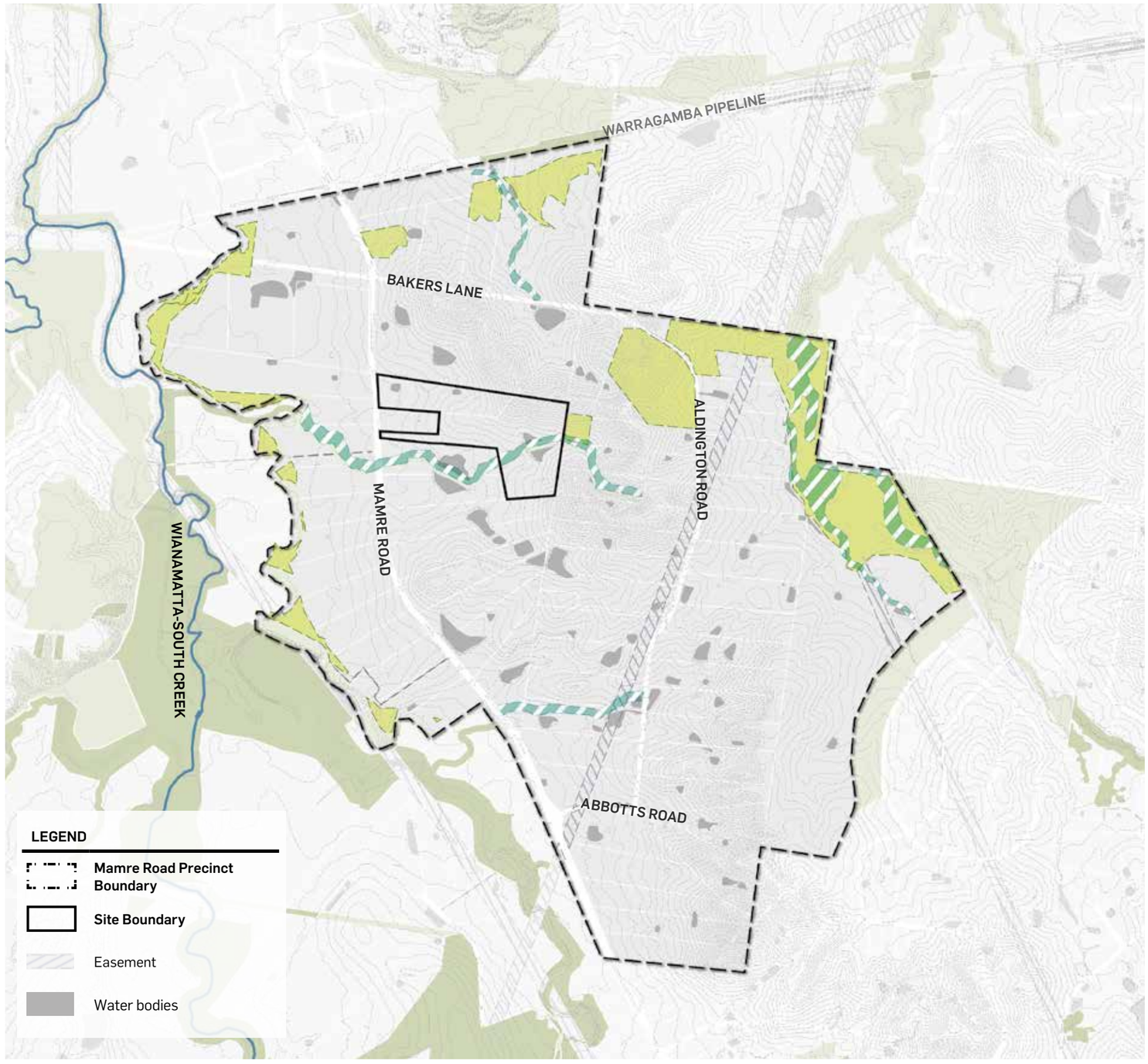

Figure 7 Mamre Road Precinct's Biodiversity & Riparian Corridors

A.7 INDIGENOUS AND EUROPEAN HERITAGE

Mamre Road Precinct has three key European Heritage Items identified at the south-west corner, off Mamre Road. The areas with high and moderate-high Aboriginal Archaeological Potential are related to the presence of creek corridor.

There is no heritage items that are visually prominent from the public domain and are not visible from or within the site's immediate visual context.

IMPLICATIONS OF DRAFT MAMRE ROAD PRECINCT DCP (NOV 2020)

Riparian Corridors

Sites of Known Aboriginal and Areas of high and moderate-high Aboriginal Potential

The DCP states that future development within this area must consider and comply with the requirements of the NPW Act. Council or Heritage NSW may require additional investigations to be undertaken as part of a development application to confirm the presence of Aboriginal cultural heritage on the land.

GPT Group is to consult with Heritage NSW to determine an appropriate course of action.

Item - General (within Mamre Road Precinct)

There is no European Heritage Items identified within the site. However, future development should respect heritage items in proximity, and recognise that it forms part of the Mamre Road Precinct's heritage character.

1. **Bayley Park - house, Item No. I2**
2. **Gateposts to Colesbrook, Item No. I3**
3. **Brick Farmhouse, Item No. I4**

Item - General (outside of Mamre Road Precinct)

KEY DIRECTIONS FOR CONCEPT PLAN:

- Sensible response to the creek corridor. Any modification of this corridor should be avoided.
- A landscape buffer should be provided along this creek corridor, and a landscape strategy should be in place to recognise and elevate the cultural landscape of the site.

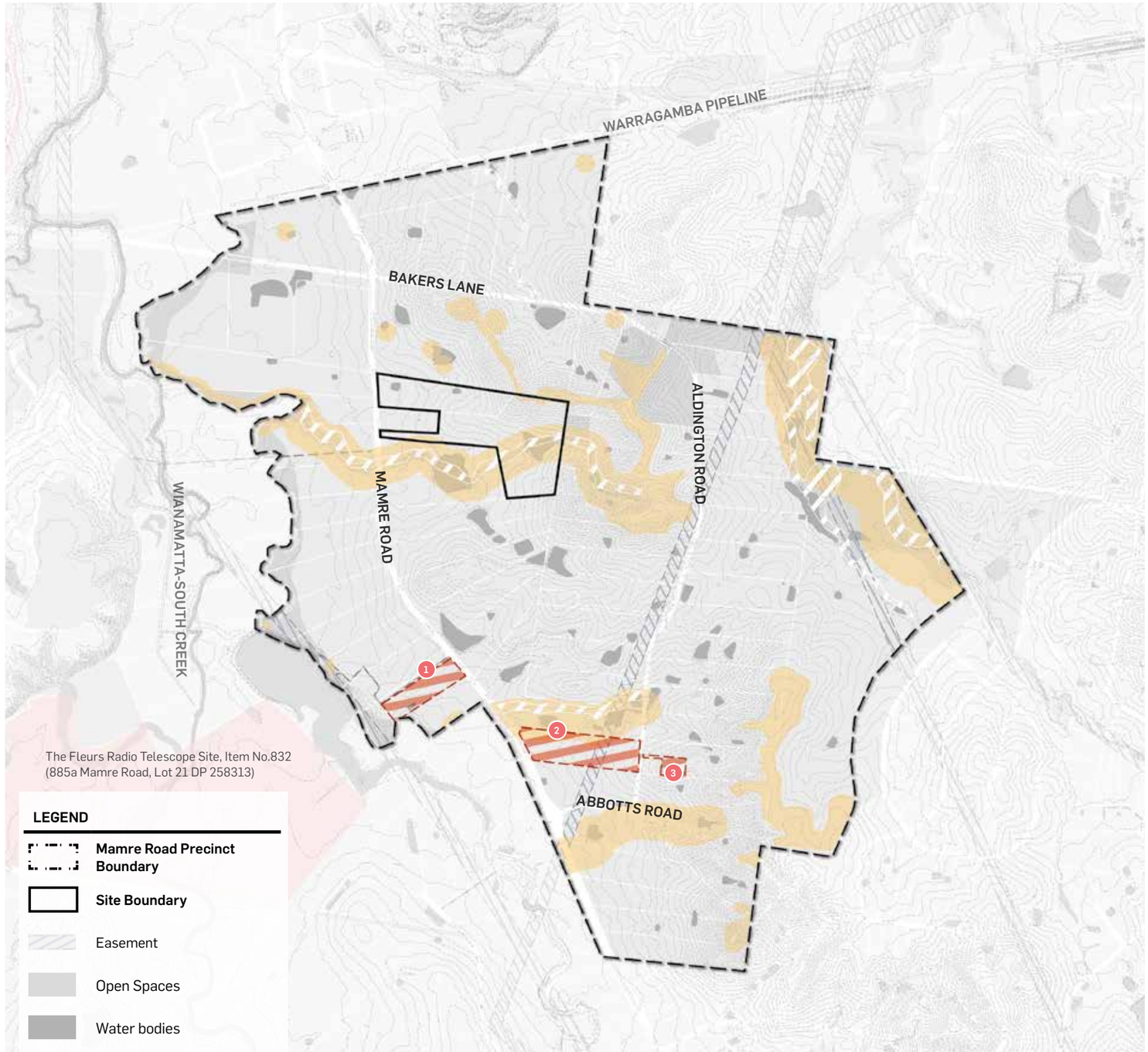

Figure 8 Mamre Road Precinct's Indigenous and European Heritage

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A.8 LAND OWNERSHIP, USES AND EMERGING DEVELOPMENT

Mamre Road Precinct currently has 7 development applications, with 2 being approved at the north-west of the site. This precinct (noted as no.1 on Figure 9) is envisioned as a warehouse, logistic and industrial facilities hub, delivered by Frasers Property and Altis Property Partners. The precinct has the capacity to support a total of 186,123m² of warehouse and office space.

A separate development application has been submitted at the southern end of this precinct to deliver a data centre of 68,934m² over 3 phases.

RECENT DEVELOPMENT APPLICATIONS AND STATE SIGNIFICANT DEVELOPMENT APPLICATIONS

- Determined
- Preparing EIS
- Response to Submissions

SURROUNDING USES AND FACILITIES

- Education
- Sports & Recreation
- Parking, Utilities and Servicing Infrastructure
- **Homestead (Bayly Park - House)**

KEY DIRECTIONS FOR CONCEPT PLAN:

- There is a current DA attached to the sleeve of land between the north and south boundary of the site entrance off Mamre Road. This will need to be considered in developing the Concept Plan for the site.

Figure 9 Mamre Road Precinct's Surrounding Land Uses and Emerging Context

A.8.1 RECENT DEVELOPMENT APPLICATIONS AND STATE SIGNIFICANT DEVELOPMENT APPLICATIONS

The following table provides an overview of the surrounding developments in reference to the landowners, development status and indicative scale of the proposed built form. This provides an indication of the emerging building grains within Mamre Road Precinct, which is dominated by logistics, warehouse and/or bulky goods form.

	Site	Land Owner	Status	Total Site Area (m²)	Total GFA (m²)	Site Coverage
	754-770 and 784-786 Mamre Road	**GPT**	**Preparing EIS**	**331,433**	**155,255**	**48%-58%**
1	Kemps Creek Warehouse, Logistics, and Industrial Facilities Hub	Frasers/ Altis JV	Determined	1,171,666	186,123	51%
2	Kemps Creek Data Centre	ARUP	Determined	136,834	68,934	50%
3	Aspect Industrial Estate	Mirvac	Response to Submission	558,213	251,042	45% - 62%
4	200 Aldington Road	Stockland & Fife	Response to Submission	720,804	374,630	61%
5	ESR Kemps Creek Logistics Park	ESR	Preparing EIS	302,716	167,028	55%

KEY INSIGHTS AND DIRECTIONS:

- The surrounding visual context includes several proposed and approved industrial developments. These developments are characterised by bulky warehouses, new road infrastructure and urban, contemporary materiality so that they are not dissimilar in form, scale and character to the built forms proposed on the subject site.
- In this regard the associated level visual effects and change in the predominant visual character of the site and surrounding visual context is anticipated by the controls that apply to the site and wider precinct.

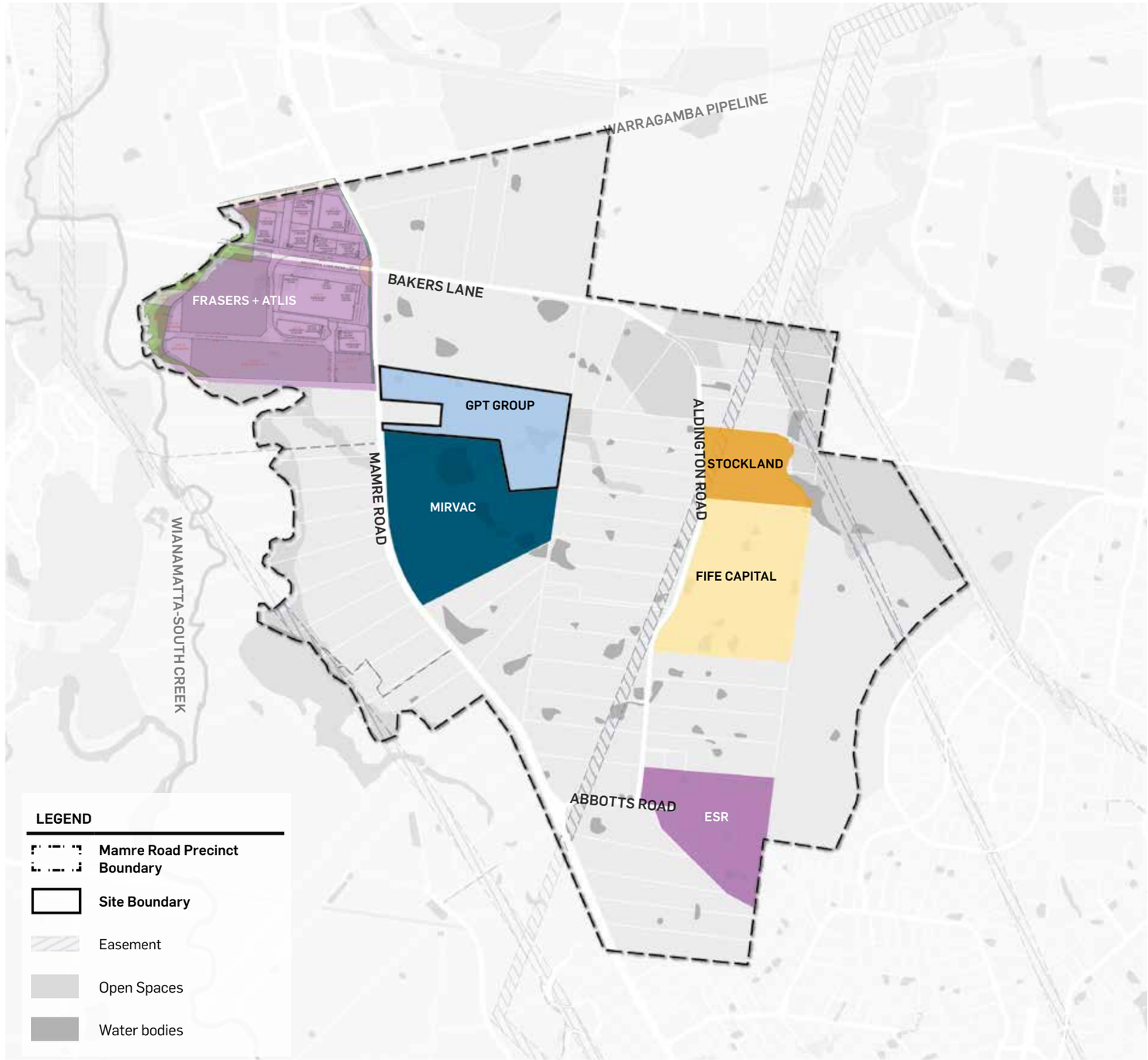


Figure 10 Mamre Road Precinct's Major Landowners

A.9 LANDSCAPE CHARACTER & VISUAL CONTEXT

The north-south ridgeline is the dominant landscape feature of Mamre Road Precinct. The view corridors across the precinct indicate that the precinct sits within a broader landscape of Penrith LGA, with Wianamatta-South Creek and Ropes Creek as two dominant green corridors. The east-west creek corridor, in particular, sets out the unique landscape setting that the site has within Mamre Road Precinct.

IMPLICATIONS OF DRAFT MAMRE ROAD PRECINCT DCP (NOV 2020)

High Points

Contours (2m Interval)

Contours (10m Interval)

Areas of High Value Biodiversity

The areas of high value biodiversity are concentrated along the South Creek Tributaries that run west-east at the centre of the site. The wetland vegetation and large native trees are present around all dams which provide habitat value for native fauna. Swamp She-oak Casuarinas, Cumberland Plain Woodland and marshland vegetation are observed from the Mamre Road.

Precinct Ridgelines

The site occupies the lower western slopes of the north-south ridgeline which crosses the site. In this regard the potential visual catchment is largely constrained by topography, east of the sites eastern boundary. Topography falls in elevation from the north-east corner of the site to the south-west.

The Draft DCP conforms that the future buildings should not be sited on ridgelines, with lower building heights around ridgelines.

Indicative Environmental Corridor

The Draft DCP identified an existing gully running west-east connecting the waterways from central east of the site to the South Creek. The DCP also outlines that the creeks and waterways should be integrated as key features of the building and landscape design.

View Corridors

The draft DCP identifies 1 view corridor which crosses the southern part of the site, broadly following the existing creek corridor or vegetation associated with it. The view corridor does not have a defined beginning or end point, or particular composition outlined for protection. We assume that views access to the eastern elevated ridgeline on the subject site should be protected where possible.

Visually Sensitive Location (250m)

The Precinct encompasses an area known as Mount Vernon and includes a local visually prominent ridgeline west of Aldington Road appears to approximately separate the residential suburb of Mount Vernon from the subject site. As a result of the intervening topography and spatial separation of the subject site from this area there is no direct visual access from Mount Vernon to any part of the subject site or proposed development. In this regard other indicative DCP view lines shown in Figure 11 are not relevant to this assessment.

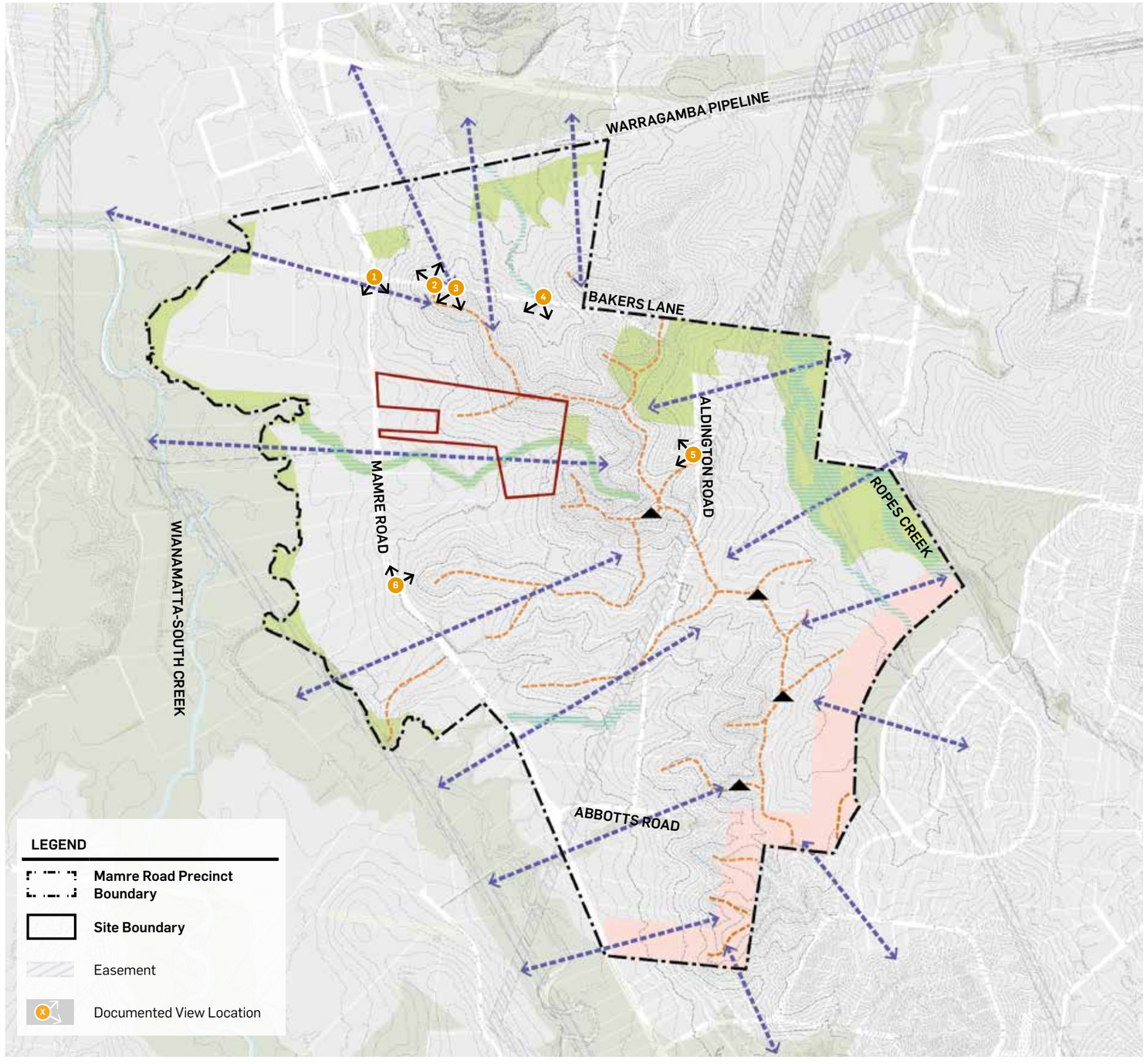


Figure 11 Mamre Road Precinct's Landscape Character & Visual Features

VISUAL CONTEXT - REPRESENTATIVE

Photo 1. View south towards the subject site from the driveway at 1 Bakers Lane. The view is partially screened by vegetation and we observed that the dwelling at 1 Bakers Lane is further set back and at lower elevation so that the majority of the subject site and proposed development would not be visible.

Photo 2. Context view from Bakers Lane looking north towards the neighbouring industrial development located north west of the site

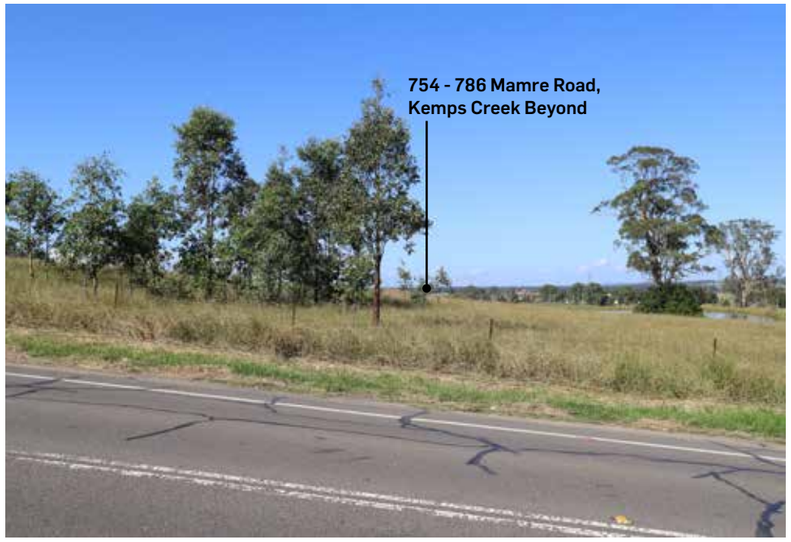


Photo 3. View south towards the subject site from the driveway at 1 Bakers Lane. The view is partially screened by vegetation and we observed that the dwelling at 1 Bakers Lane is further set back and at lower elevation so that the majority of the subject site and proposed development would not be visible.

Photo 4. View south from the Emmaus Catholic College entry to the north-east corner of the site. GIS view shed analysis confirms that due to proposed excexcavation and resultant floorplate RL, the upper parts of warehouse 3 will not be visible.

Photo 5. View looking west to rear of site from 32a Aldington Road. The site is obscured by intervening ridgelines running along Aldington Road.

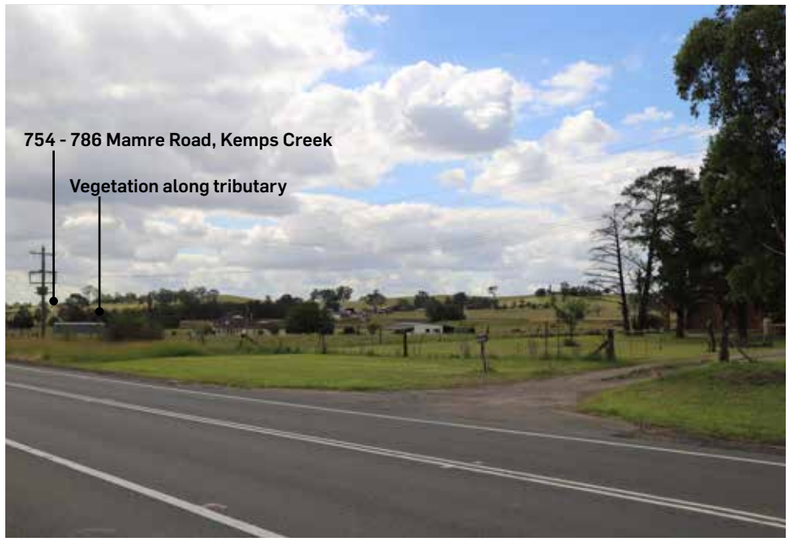


Photo 6. View looking north at the approximate southern extent of the visual catchment towards the site along Mamre Road, opposite 819 Mamre Road. Site is partly obscured by neighbouring buildings and screened by existing vegetation along the South Creek tributary.

PART A

VISUAL ANALYSIS

A.10 EXISTING VISUAL CHARACTER OF THE SITE & SURROUNDS

A.10.1 EXISTING VISUAL CONTEXT

The site is immediately surrounded by gently undulating and relatively flat land to the north, west and south. The eastern margins of the site rise in elevation to meet a low local ridgeline which broadly sits in a north-south alignment, east of the eastern site boundary. A short spur from that ridgeline projects to the south-west and into the site near its north-east corner in the vicinity of the existing dwelling at 754 Mamre Road. The topography including ridgelines and spur are identified in Figure 3 Mamre Road Precinct's Elevation Analysis. The spur and ridgeline topography visually enclose the subject site to the north and east so that the landscape along Bakers Lane and Aldington Road are lower in elevation relative to it. In this regard the underlying topography surrounding the site constrains the potential visual catchment. North of Bakers Lane the landscape is characterised by relatively open pastoral land including typically rural features such as post and wire fences, isolated groups of remnant vegetation, riparian corridors that are identifiable by associate vegetation, private power supplies reaching isolated and intermittent residential dwellings and light industrial or storage facilities.

The northern side of Bakers Lane includes two school campuses both located at some distance from and below the road level including Mamre Anglican College to the west and Emmaus Catholic College to the east. Both schools are visually and spatially well separated from the site by intervening topography and isolated vegetation. In addition the schools are characterised by large open spaces, long low built forms including some that are the equivalent to two to three residential storeys in height, isolated groups of trees and open expanses of hard standing and carparking. Bakers Lane includes several dwellings including at 1 Bakers Lane on the north side located approximately 100m from Mamre Road. The front elevation and windows of this dwelling are orientated to the south and approximately towards the subject site albeit that some topography including the lower slopes of the spur and vegetation partially screen potential views to the south. In addition the dwelling is located below the road level further constraining potential visibility to parts of the site. Two other dwellings are located on local knolls along the south side of the road at 23 and 25 Bakers Lane which are surrounded by ornamental planting and are located between 300 and 350m away from the north-east corner of the site.

The east end of Bakers Lane becomes Aldington Road and curves gently to the south so that it broadly runs parallel to the eastern boundary of the subject site albeit at a significantly lower level relative to the elevated eastern margins of the site. 53 Aldington Road is located some 400m from the eastern site boundary and is set at relatively low elevation, close to the road and within a large block of land that is heavily trees. Several dwellings are located along both sides of the road and we observed that those to the west spring from elevated mid-slope situations and are orientated towards the east presumably to take in the existing expansive rural outlook. Two dwellings along the east side at 32A and 106 Aldington Road present to the west and potentially align with the eastern site boundary and may be exposed to potential views of the upper most roof forms of proposed warehouses 1, 2 and 3. These dwellings are located on land zoned IN1 but which is not yet included in any known development proposal and is predominantly characterised by open space, few built forms and some remnant and ornamental planting. Further commentary and testing of the visual effects of the proposed built form on those views is included in Part C. Section C.2, Analysis of photomontages.

The visual character of the southern part of Aldington Road and the west side of Mamre Road to the south of the site, is influenced by flatter topography and includes more built form compared to the north-east areas of Aldington Road. In other words large scale horticultural operations that are characterised by groups of long linear low glass house forms, bulky storage facilities for example at 864-882 and 844-862 Mamre Road and to the south-west at 885 to 899 Mamre Road. In addition we observed a large storage facility characterised by wide open expanses of hard stand and in front of the heritage item located at 919-929 Mamre Road. Another large rural storage shed and semi-industrial uses occupy the adjacent site to the north at 901-915 Mamre Road. We observed the presence of isolated, large dwellings along both sides of Mamre Road in the vicinity of the site, some of which we note appear to be associated with horticultural activities or bulk storage developments.

Low-lying and relatively flat land or 'rural- pastoral character west of the subject site is marked by industrial development hoardings along its Mamre Road boundary, indicating potential development large warehousing which we note already exist to the north at 2-4 Distribution Drive. This development includes 7 large warehouses which range in height and bulk with elevations between approximately 340m to 210m in length fronting Mamre Road. Built forms set close to Mamre Road appear to be approximately 24m in height. A similar scale industrial warehouse development at Erskine Park arranged around Sarah Andrews Close occupies land along the east side of Mamre Road, north of Bakers Lane and the Warragamba Dam pipe line.

In this regard the immediate and wider visual context of the subject site albeit still partly of 'rural character' also includes existing large-scale, bulky warehouses, many of which are set close to and are highly visible from Mamre Road. We note that other parcels of land surrounding the subject site to the south and west are zoned for and are currently progressing large scale industrial development which is not dissimilar in character, height and scale to the proposed development. It appears that given the underlying land-use zone that the existing visual character of this part of Mamre Road is anticipated to change significantly, transitioning from a rural-pastoral landscape one that will be predominantly characterised by industrial uses and large scale and height buildings.

A.11 VISUAL CATCHMENT

KEY INSIGHTS

- The potential visual catchment of the subject site is relatively constrained to the closest surrounding roads including Mamre Road for the length of its western boundary and a short section of Bakers Lane to the north. There is no visibility of the subject site or proposed development to either school located along the north side of Bakers Lane.
- There is limited visibility of the subject site from the wider visual catchment to the west notwithstanding that elevated local topography east of the site are visible from more distant locations.
- Lidar mapping of topography within and surrounding the site indicates that no part of the built form proposed is visible from the east side of Aldington Road including from isolated elevated dwellings for example 32A and 106 Aldington Road.
- Isolated elevated dwellings located to the south-east along the west side of Aldington Road may be exposed to some oblique north-westerly views to parts of the site and potentially to the upper parts of some warehouses. We note that these lots are characterised by ornamental vegetation around the dwellings which may provide some screening of views and further that intervening undulating topography is likely to affect potential view access. Further, as described in the **Section A.10.1 Existing Visual Context,** these dwellings present to Aldington Road and are orientated towards the east so that views available in that direction will be unaffected by the proposed development.
- Close views from Mamre Road will be available for a limited section of the road corridor and from moving viewing situations. Notwithstanding the close proximity of Mamre Road, intermittent vegetation located in the road reserve adjacent to the site's western boundary will offer some screening effects in those views to parts of the site.
- Other than from Mamre Road, the subject site and built forms proposed are not visible from any high sensitivity view locations from which views would be direct or sustained for example national parks, reserves or schools.
- The potential visual catchment extends to the west across the low lying landscape towards Twin Creeks Golf Course and associated residential development for example the east side of Medinah Avenue. Fieldwork observations confirm that visibility is limited to isolated views that are available between side setback between dwellings. The foreground of such views includes an electrical easement that is characterised by high voltage powerlines and lattice style pylons and a background composition that includes built forms that are not dissimilar in character and scale to those proposed.

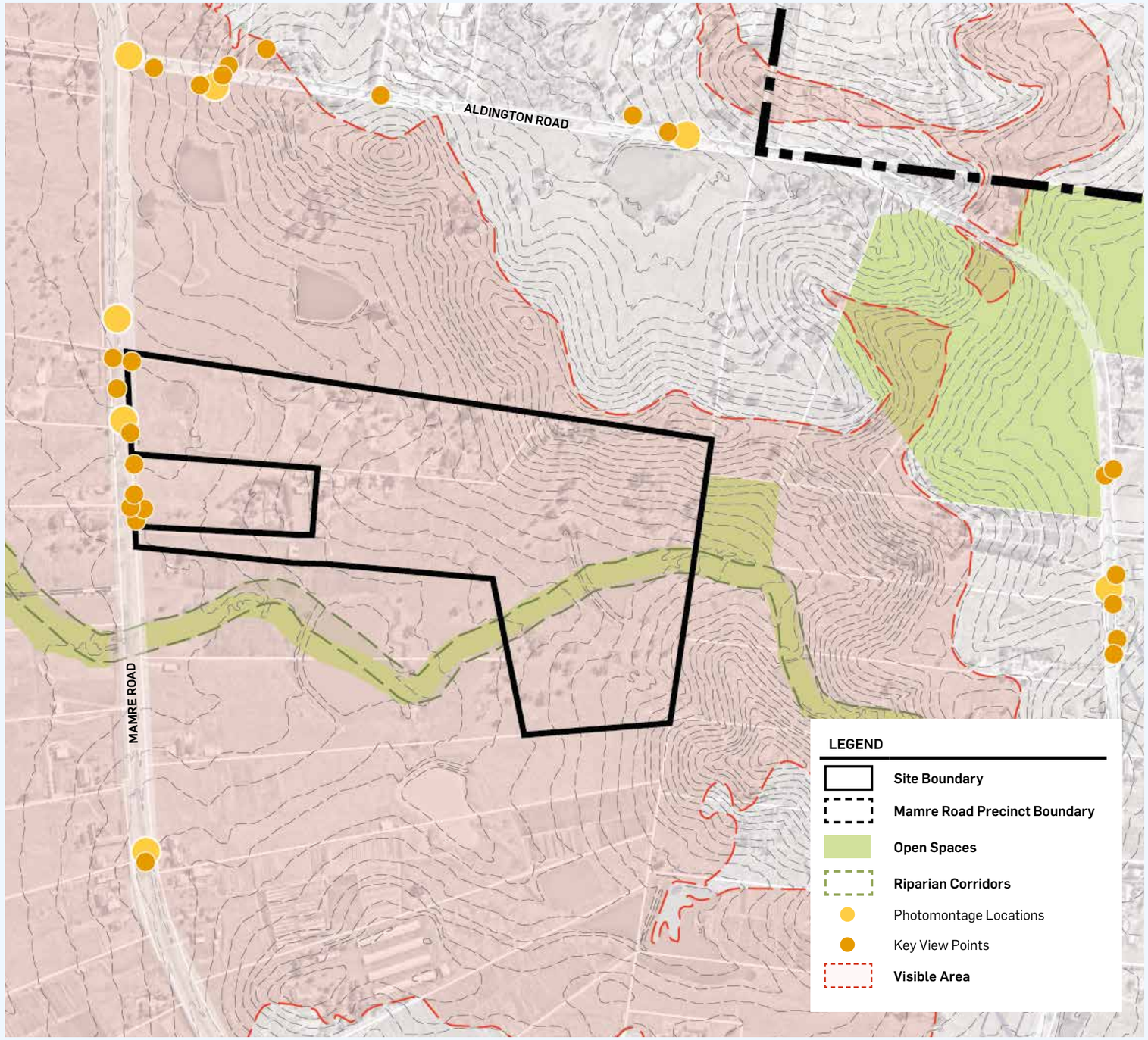


Figure 12 Potential Visual Catchment Map and Key View Points

A.11.1 SCENIC QUALITY

Scenic quality relates to the likely expectations of viewers regarding scenic beauty, attractiveness or preference of the visual setting of the subject site and is baseline factor against which to measure visual effects. Criteria and ratings for preferences of scenic quality and cultural values of aesthetic landscapes are based on empirical research undertaken in Australia by academics including Terrance Purcell, Richard Lamb, Colleen Morris and Gary Moore.

Moore (2006) summarises the theoretical and methodological constructs in the field of environment, behaviour and society (EBS) and discusses the largest body of research in this area prepared by Associate Professor Terry Purcell and Dr Richard Lamb. The research details results in relation to the experience, perception and aesthetics of natural and cultural landscapes, affective experience of the environment, and the perception of scenic quality.

Therefore, analysis of the existing scenic quality of a site or its visual context and understanding the likely expectations and perception of viewers is an important consideration when assessing visual effects and impacts. The site would be considered in isolation and within its visual setting as having moderate-high scenic quality given its wide open green-spaces, vegetation and under development across the wider school site and subject site within it

.

A.11.2 VIEW PLACE SENSITIVITY (PUBLIC VIEW)

View place sensitivity refers to the importance of a view or view place in the public domain. View place sensitivity means a measure of the public interest in the view. The public interest is considered to be reflected in the relative number of viewers likely to experience the view from a publicly available location. Places from which there would be close or middle distance views available to large numbers of viewers from public places such as roads, or to either large or smaller numbers of viewers over a sustained period of viewing time in places such as reserves, beaches and walking tracks, are considered to be sensitive viewing places.

A.11.3 VIEW PLACE SENSITIVITY (PRIVATE VIEW)

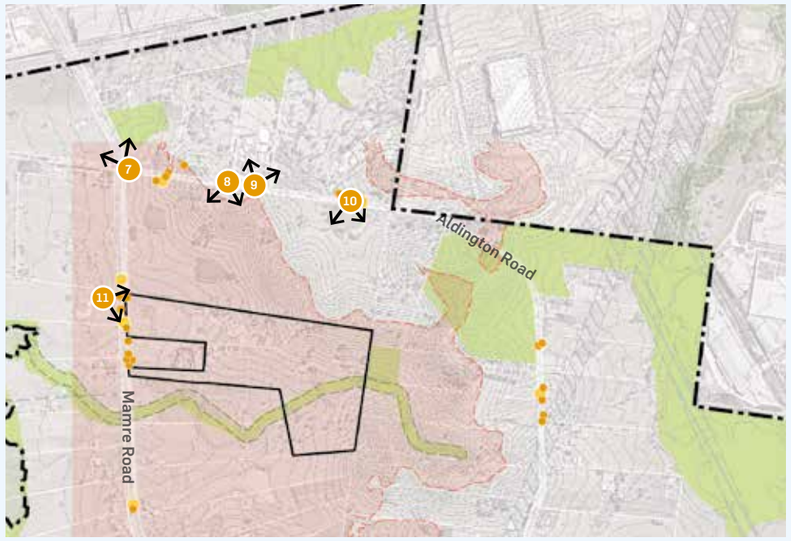
Viewer sensitivity is a judgement as to the likely level of private interest in the views that include the proposed development and the potential for private domain viewers to perceive the visual effects of the proposal. The spatial relationship (distance) the length of exposure and the viewing place within a dwelling are factors which affect and overall rating as to the sensitivity to visual effects. The visual context section identifies surrounding residential dwellings that are located within the immediate visual catchment of the site. Fieldwork observations and Lidar data across the potential visual catchment have been used to determine the extent of external visibility of the built forms proposed from surrounding residences. The highest roof RL at the north-east corner of warehouse 3 was used as a marker in map the potential visual catchment. In this regard the dwelling potential most affected by visual effects (external views of any part of the built form proposed) is 1 Bakers Lane. A photomontage has been prepared to inform our analysis of the likely visual impacts on views from this dwelling.

VISUAL CONTEXT - REPRESENTATIVE

LEGEND

- Site Boundary
- Mamre Road Precinct Boundary
- Visible Area

- All Photomontage Locations
- Key View Points



View Location Reference Map

Photo 7. View of General Industrial Zone from north-west of the site.

Photo 8. Isolated elevated residence south side Bakers Lane located along at 21 Bakers Lane at crest of the local ridgeline.

Photo 9. Mamre Anglican School on the north side of Bakers Lane.

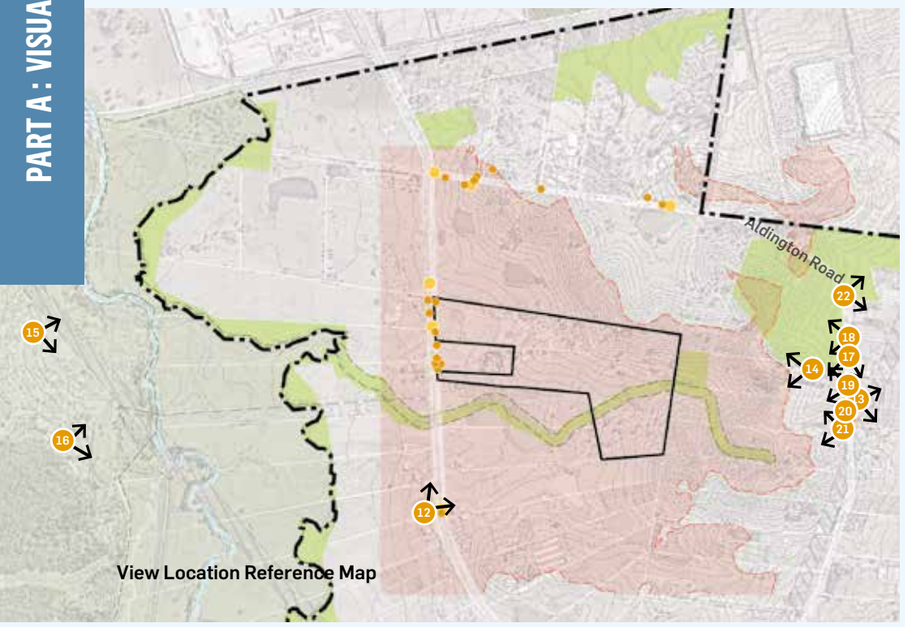
Photo 10. View looking south-east towards the north boundary of the site from Bakers Lane including a dwelling at 1-23 Aldington Road.

Photo 11. View looking east towards the site from Mamre Road

VISUAL CONTEXT - REPRESENTATIVE

LEGEND

- Site Boundary
- Mamre Road Precinct Boundary
- Visible Area
- All Photomontage Locations
- Key View Points



View Location Reference Map

Photo 12. Detail of south-east part of the site past pond along Mamre Road

Photo 13. Detail view of the west elevation of 106 Aldington Road, opposite the rear (east) boundary of the site.

Photo 14. View west to rear of site from 32a and 106 Aldington Road

Photo 15. Views from Twin Creeks residential development

Photo 16. Views from residential development at Twin Creeks. GIS modelling indicates that the upper parts of the built form proposed may be partially visible in the distant background of this and similar views, approximately 1.1km to the east.

VIEWS OF SURROUNDING RESIDENTIAL DEVELOPMENT

Photo 17. Streetscape Character of Aldington Road view to south.

Photo 18. Detail view of dwelling at 53 Aldington Road, near rear of the site.

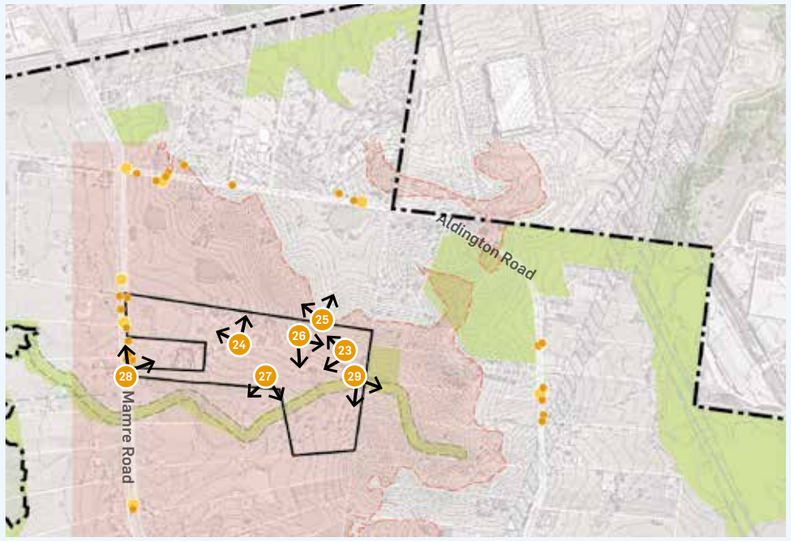
Photo 19. Detail of 99 Aldington Road, neighbouring development site at the east of site

Photo 20. View south-west to the site including 113-127 Aldington Road.

Photo 21. Detail of 113-127 Aldington Road.

Photo 22. Detail of 32A Aldington Road.

REPRESENTATIVE VIEWS FROM THE SUBJECT SITE



View Location Reference Map

Photo 23. View looking west towards the Blue Mountains from the elevated knoll at the north-east of the site.

Photo 24. View looking north-west from north west corner of the site

LEGEND

- **Site Boundary**
- **Mamre Road Precinct Boundary**
- **Visible Area**
- All Photomontage Locations
- Key View Points

Photo 25. View looking north-west from the north boundary of the subject site towards neighbouring industrial development.

Photo 26. View south east from the ridge-top dwelling.

Photo 27. View south from south west corner of the dwelling fence line on sub-site.

Photo 28. Lower site detail view north Mamre Rd

Photo 29. View looking south-east towards the pond from the driveway at the north-east of the site.

A.12 SITE CONSTRAINTS AND CONSTRAINTS

Based on the above urban and visual analysis, the site has six (6) key constraints, that poses challenge to the current Estate SSDA Master Plan.

CONSOLIDATED SITE CONSTRAINTS

Indicative Environmental Corridor

The east-west creek corridor within the site is zoned as Environmental Conservation (E2 Zone), providing a key link for the Precinct's biodiversity system.

Whilst the WSEA SEPP 2009 supports the flexibility to relocate E2 zone within the site, any modification to the natural waterbody will need discussion and approval of NRAR.

Estate SSDA Master Plan Proposed Environmental Corridor Realignment

The realignment of the environmental corridor poses the risk of native vegetation destruction, and the strong reliance on surrounding land owners to ensure impact can be minimised. The realignment will be more appropriate if it was responding to the east-west view corridor.

Flooding 100yr-ARI

Mamre Road Precinct Proposed High Order Road Alignment

The Estate SSDA Master Plan aligns with the principle of Draft Mamre Road Precinct DCP, in providing a north-south road corridor across the site.

Area with Medium-High Aboriginal Archaeology Potential

Any modification of the creek corridor will also need to consider the potential presence of Aboriginal Archaeology Items. Further investigation is required at DA Stage to identify any archaeology deposits and appropriate course of action.

Key View Corridor

One of the Precinct's view corridors transverse southern part of the site from Wianamatta-South Creek at the west to the Precinct's Ridgeline at the east. Proposed built forms on-site should avoid obstruction of this view corridor.

Precinct Ridgelines

Slope over 15%

The site has the greatest slope at the north-eastern corner, where Stage 1 development is envisioned to occur. Development on sloped land requires significant earthwork, which results in greater construction, and poses impact on the site's landscape character.

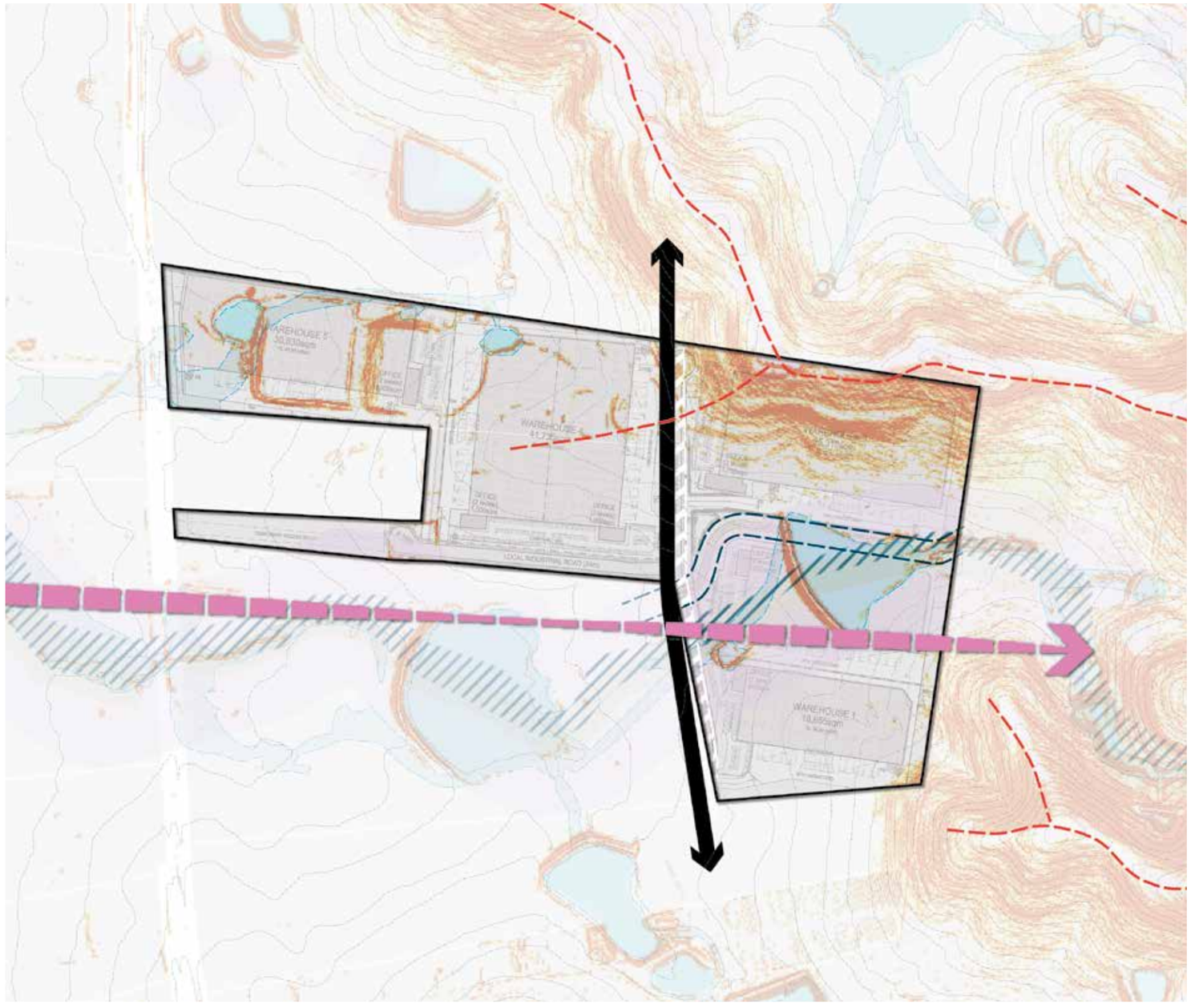
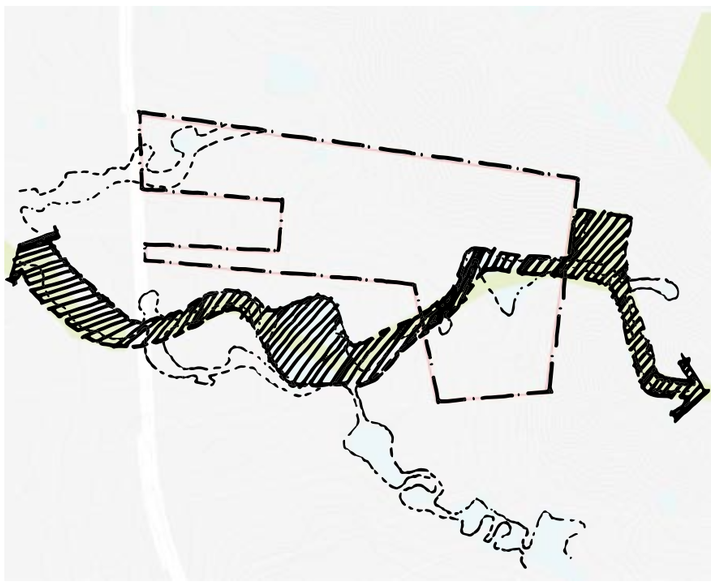


Figure 13 Site's Consolidated Constraints Map, overlayed on Estate SSDA Master Plan

A.13 KEY DIRECTIONS

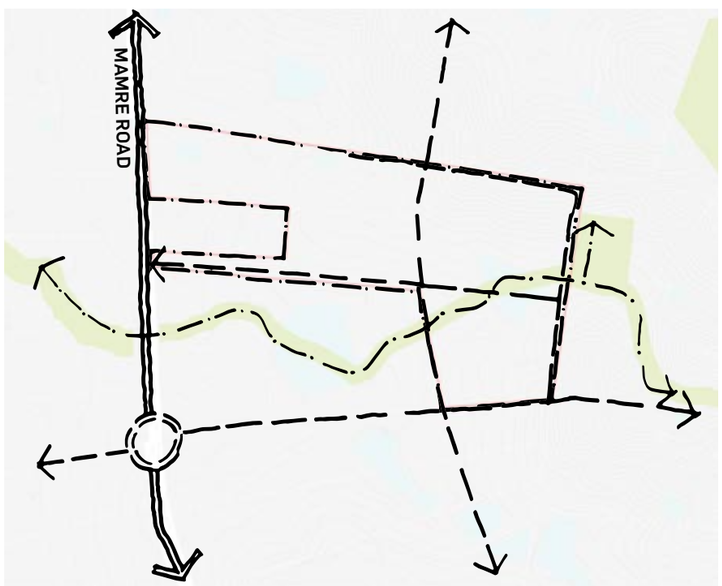
01 Verify views to Ridgelines & View Corridors

- The development is to consider the ridgeline towards the northern east corner of the site and along the eastern boundary of the site.
- The view corridor mapped in the draft DCP is to be verified in the visual assessment (VPG on page 54-55).



02 Green and Blue Connections

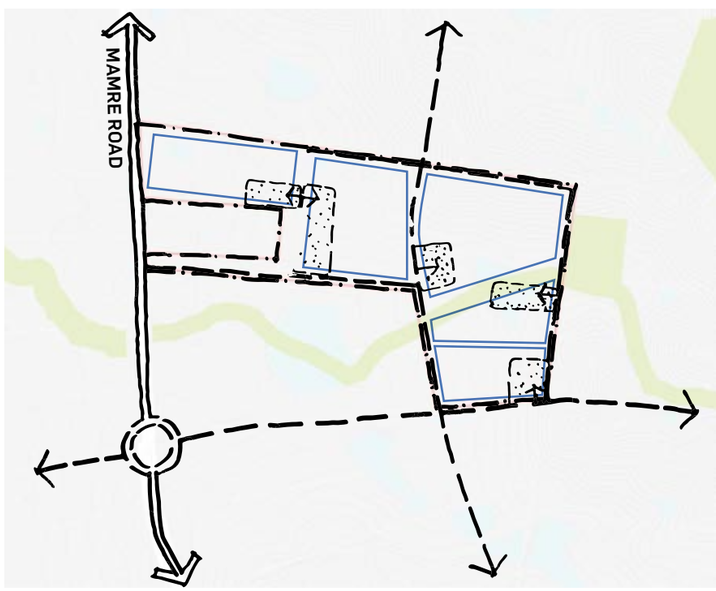
- Celebrate landscape features on site including the environmental conservation area at the eastern part of the site through landscape and water sensitive urban design.
- Incorporate existing water run off and mitigate flooding issue through Water Sustainable Urban Design.



03 Access & Movement

Development to incorporate access and movement by responding to future precinct connections:

- Proposed north-south High Order road that cuts though the centre of the site.
- Consider an active transport corridor that traverses east west connecting future open space to South Creek.



04 Servicing & Building Configuration

- Provide a variety of warehouse sizes to ensure adaptability for changing needs into the future.
- Stepping down buildings that responds to landform and topography.
- Efficient carparking and loading zones configuration.
- Provision for potential Future Dedicated Freight Corridor 'by others' of 10m along the edge of northern boundary to the estern half of the site.

PART B

URBAN DESIGN REVIEW

B.1 MASTER PLAN OPTIONS ANALYSIS

B.1.1 OPTION 1

Prior to the Mamre Road Draft DCP, no E2 riparian zone and freight corridor.

This layout option consists of six (6) warehouses integrated into two street hierarchies comprising of a 'distributor' and 'collector' road. The design took into consideration the Penrith DCP 2014 and was prepared prior to the 2020.

Pros

- Shorter façades orientated towards the Access Road, presenting a more regular rhythm along this spine.
- Presents as smaller scale of built form and reducing perception of visual bulk from the street.
- The proposed built forms steps down with the fall of the land from both north-south and east-west directions.

Cons

- Warehouse 4 closes off the 'temporary access road' area losing the opportunity for expanding the use of that land for the development
- Similar scale of warehouses across the site with limited diversity risking the flexibility of the site to adapt with changing future needs.

Figure 14 Concept Master Plan Option 1

1:4,000 @ A3
0 50 100 150 200

B.1.2 OPTION 2

With riparian zone but no freight corridor

A refined version of Option 1 and designed in response to Mamre Road Precinct Draft DCP exhibited on December 2020. The sketch option integrates a Riparian Corridor and two new road hierarchies comprising of an 'access' and 'local industrial' road.

Pros

- Integration of the riparian corridor for conservation of biodiversity and water management towards the east of the site.
- Shorter façades orientated towards the Access Road, presenting a more regular rhythm along this spine.
- The proposed built forms steps down with the fall of the land from both north-south and east-west directions.
- Presents as smaller scale of built form and reducing perception of visual bulk from the street.

Cons

- Warehouse 4 closes off the 'temporary access road' area losing the opportunity for expanding the use of that land for the development
- Similar scale of warehouses across the site with limited diversity risking the flexibility of the site to adapt with changing future needs.
- Active frontage on Warehouse 3 faces north resulting in a poor interface with riparian corridor

Figure 15 Concept Master Plan Option 2

B.1.3 OPTION 3

Variation of Option 2 depicting four larger buildings, including E2 re-alignment and no freight corridor.

This option reassesses the location of the local industrial road to achieve greater efficiency of the building arrangement. This option has total of four (4) warehouse facilities with and includes the Riparian Corridor.

Pros

- Integration of the riparian corridor for conservation of biodiversity and water management towards the east of the site responding to the Draft Mamre Precinct DCP
- Warehouse 3 active frontage faces south improving the interface and passive surveillance to proposed riparian corridor.
- The proposed built forms steps down with the fall of the land from both north-south and east-west directions.
- Ensures flexibility by creating the opportunity to connect from Mamre Road to the Access Road via 'Temporary Access Road'.
- Local Industrial Road along the shared southern boundary to adjoining Lot 54-58 reinforces the public domain edge, and ensures the efficient use of land.
- Larger and consolidated warehouse typologies ensure adaptability for changing future needs.

Cons

- The largest warehouse 1 may create perceptions of visual bulk along new Access Road.
- Lack of diversity in the proposed scale of warehouses across the site.

Figure 16 Concept Master Plan Option 3

1:4,000 @ A3
0 50 100 150 200

B.2 CONCEPT MASTER PLAN

B.2.1 PREFERRED CONCEPT MASTER PLAN

The preferred concept master plan retains the proposed road network and the Riparian Corridor. It comprises of five (5) warehouse facilities in total. A 10m allowance toward the northern boundary at the eastern half of the site allows for a future freight corridor "by others" which is being considered in the layout as required in the Mamre Road Precinct Draft DCP.

The final master plan has considered the draft DCP. Key benefits of the proposal include:

- Integration of the riparian corridor for conservation of biodiversity and water management towards the east of the site responding to the Draft Mamre Precinct DCPP.
- Integration of freight corridor in response to Draft Mamre Precinct DCP, creating the opportunity to connect with future Western Sydney Aerotropolis as one of the Integrated Logistics Hubs.
- Warehouse 3 active frontage faces south improving the interface and passive surveillance to proposed riparian corridor.
- The proposed built forms steps down with the fall of the land from both north-south and east-west directions.
- Ensures flexibility by creating the opportunity to connect from Mamre Road to the Access Road via 'Temporary Access Road'.
- Local Industrial Road along the shared southern boundary to adjoining Lot 54-58 reinforces the public domain edge, and ensures the efficient use of land.
- Better diversity in built forms with differing scales of warehouses allowing adaptability for changing future needs.
- Presents as smaller scale of built form and reducing perception of visual bulk from the street.
- Ancillary offices positioned facing the Access Road to activate the public interface.
- Proposes more than the minimum building setback of 12m from the Access Road to allow for more landscaping opportunities.
- Sustainable architectural design, material selection and finishes.

Figure 17 Preferred Concept Master Plan

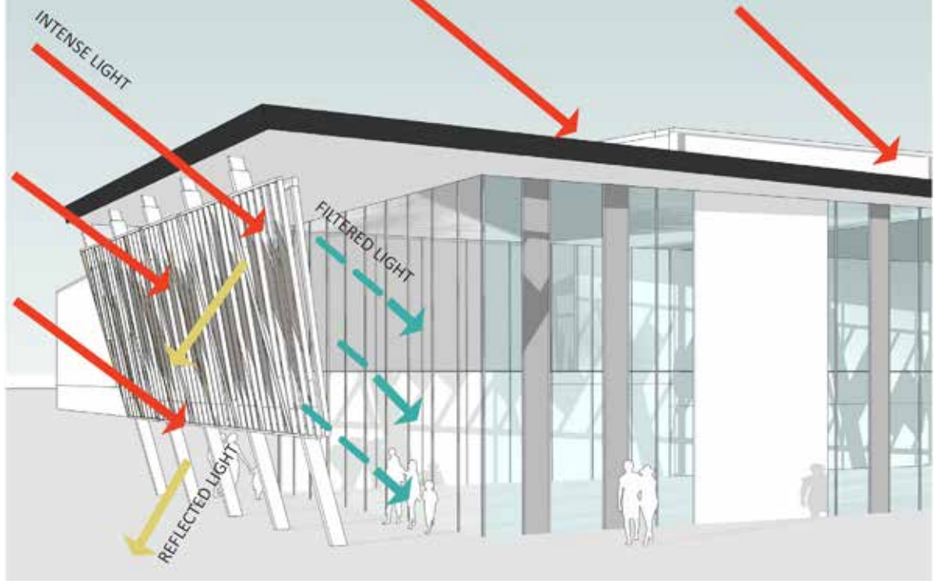


Figure 18 Sustainable architectural elements incorporating brise soleil ensures visual interest from the public domain and high quality design outcomes.

Figure 19 Filteres sunlight and shadows on facade formed by the brise soleil provides a dynabic outcome to the facade. Sustainable features ensures shade and strategy to capture coooling breezes in the summer time.

Figure 20 Stepped retaining walls and planting ensures visual relief and minimises perception of blank walls from the public domain. High design quality outcome of the proposal ensures a positive precedent to follow within the Mamre Road Precinct.

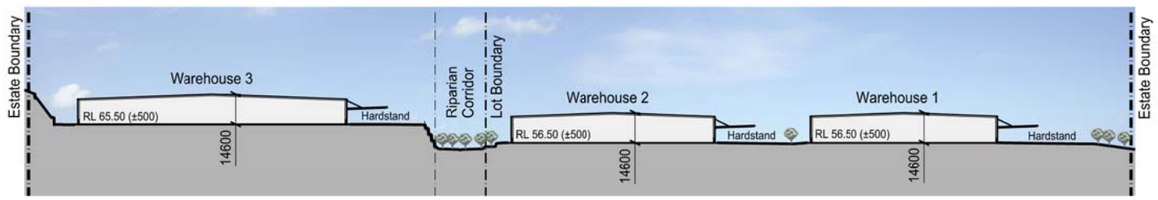


Figure 21 Section 02 at 1:3000

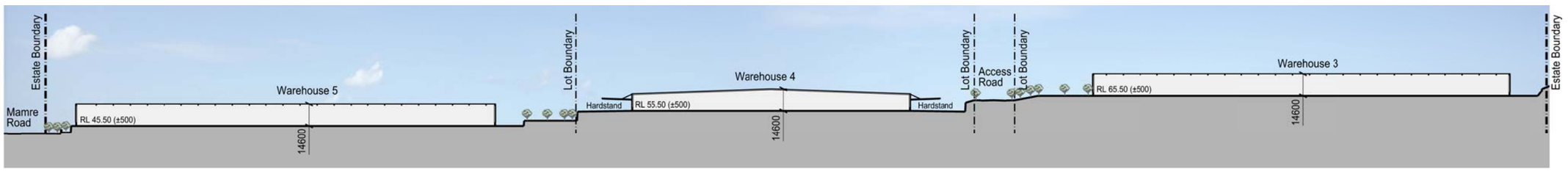


Figure 22 Section 01 at 1:3000

B.3 LANDSCAPE CONCEPT PLAN

The proposed landscape master plan ensures visual screening of the development from the public domain as much as possible.

It compliments the high quality design outcome envisaged for the concept master plan and in accordance with water sensitive urban design principles and the future Vegetation Management Plan.

The proposed landscape program for the site is organised into five distinct typologies:

1. **Boundary Planting**
   Proposed planting comprises of native species with some species as specified in the future Vegetation Management Plan.

2. **Bio Basin**
   Proposed planting comprises of native species which are to meet civic performance requirements.

3. **Riparian Zone**
   Proposed planting in accordance with the future Vegetation Management Plan.

4. **Streetscape Frontages**
   Proposed planting will be comprised of a mix of exotics 30/70 with some turf areas of seasonal variation.

4. **Mamre Road Frontage**
   Planting to screen view of warehouses from Mamre Road

Figure 23 Landscape Master Plan

B.4 STAGING PLAN

The concpet master plan will be implemented in stages of the Yiribana Logistics Estate and ensures the logical sequencing of development.

- Stage 1 is composed of warehouse 1 and 3. It will also allow for estate wide site preparation, infrastructure and servicing works and construction of two warehouses.
- Both warehouses 1 and 3 are capable of being constructed and operated independent of one another subject to the required earthworks, civil and servicing infrastructure and roads being delivered.
- Future stages of the concept master plan have been accounted for in the impact assessment although detailed design of warehouses 2, 4 and 5 will form separate DAs.

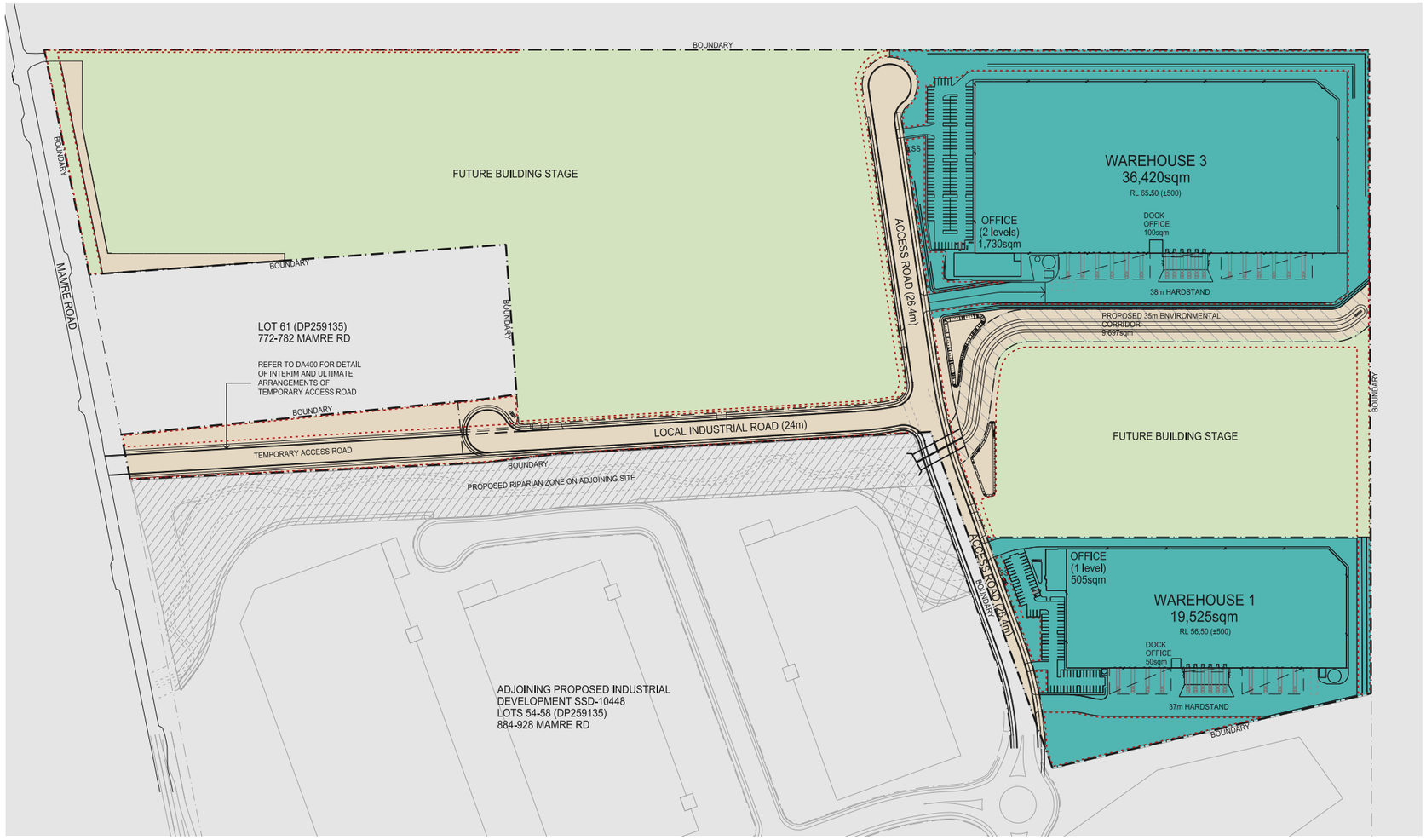


Figure 24 Staging Plan

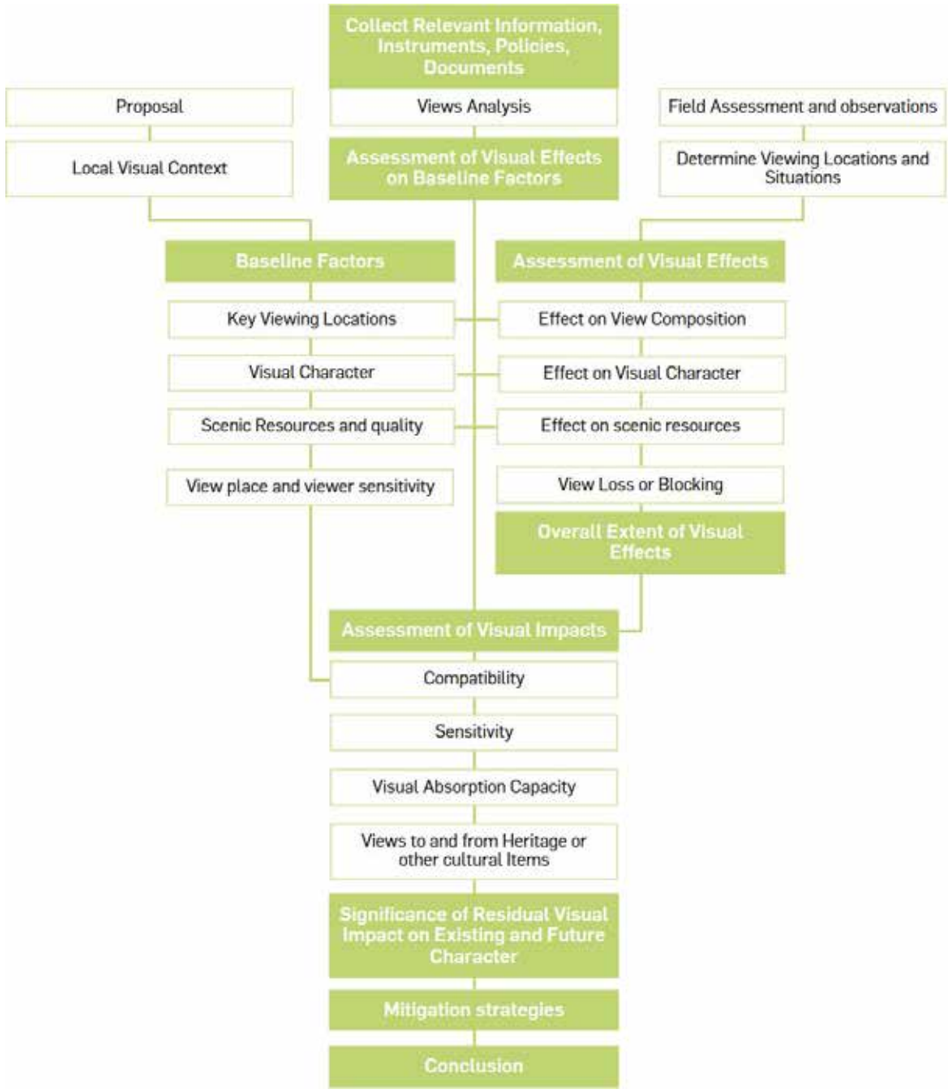
1:4,000 @ A3

0 50 100 150 200

PART C

VISUAL IMPACT ASSESSMENT

C.1 URBIS VISUAL IMPACT ASSESSMENT METHOD



There is no established method specified or typically required to be used in NSW when undertaking a Visual Impact Assessment.

There are a variety of methods used, some more widely than others. At Urbis we follow guidance provided in;

- Guidelines for Landscape and Visual Impacts Assessment 3rd edition, published by the Landscape Institute and Institute of Environmental Management and Assessment (GLVIA)
- Guideline for landscape character and visual impact assessment, Environmental Impact Assessment practice note EIA -NO4 prepared by the Roads and Maritime Services December 2018 (RMS LCIA)

We continue to evolve our methodology by reviewing 'best-practice' examples to provide a nuanced and appropriate response to the specific visual context, potential visual catchment in relation to the nature and scale of development proposed and the changing regulatory framework which in some cases allows for significant visual change and makes the concept of 'visual compatibility' highly relevant.

The extent of the visual effects is the baseline assessment against which to judge the visual impacts. Whether a visual effect is an impact of potential significance cannot be equated directly to the extent of the visual effect. For example, a high visual effect can be quite acceptable, whereas a small one can be unacceptable. Therefore, it is necessary to give a weighting to the assessed levels of effects to arrive at an overall assessment of the visual impact.

The 'bespoke' or nuanced response to the assessment of visual impacts relates to selecting and applying relevant 'weighting' factors. This method therefore does not equate visual effects directly to visual impacts. The approach is to assess visual effects to arrive at an overall level of visual effect of the proposal for each kind of viewing place and then to assess the level of impact, if any, relevant external factors are given differential weighting to impact criteria.

In this regard the relative importance of impacts is distinguished from the size of the effect.

However, the assessment of visual impacts also involves considering other relevant factors as listed. The first three factors are those most relevant to this assessment;

Compatibility with the existing visual environment

Visual Compatibility is not a measure of whether the proposal can be seen or distinguished from its surroundings but refers to whether the proposal can be constructed and utilised without the intrinsic scenic character of the locality being unacceptably changed. It assumes that there is a moderate to high visibility of the project to some viewing places. It further assumes that novel elements which presently do not exist in the immediate context can be perceived as visually compatible with that context, provided that they do not result in the loss of or excessive modification of the visual character of the locality.

Sensitivity of the view place

Sensitivity relates to the importance of a view or view place in the public domain. View place sensitivity means a measure of the public interest in the view. The public interest is considered to be reflected in the relative number of viewers likely to experience the view from a publicly available location. Places from which there would be close or middle distance views available to large numbers of viewers from public places such as roads, or to either large or smaller numbers of viewers over a sustained period of viewing time in places such as reserves, beaches and walking tracks, are considered to be sensitive viewing places.

Physical Absorption Capacity

Physical Absorption Capacity (PAC) means the extent to which the existing visual environment can reduce or eliminate the perception of the visibility of the proposed redevelopment.

PAC includes the ability of existing elements of the landscape to physically hide, screen or disguise the proposal. It also includes the extent to which the colours, material and finishes of buildings and in the case of boats and buildings, the scale and character of these allows them to blend with or reduce contrast with others of the same or closely similar kinds to the extent that they cannot easily be distinguished as new features of the environment.

Prominence is also an attribute with relevance to PAC. It is assumed in this assessment that higher PAC can only occur where there is low to moderate prominence of the proposal in the scene.

Low to moderate prominence means:

Low: The proposal has either no visual effect on the landscape or the proposal is evident but is subordinate to other elements in the scene by virtue of its small scale, screening by intervening elements, difficulty of being identified or compatibility with existing elements.

Moderate: The proposal is either evident or identifiable in the scene, but is less prominent, makes a smaller contribution to the overall scene, or does not contrast substantially with other elements or is a substantial element, but is equivalent in prominence to other elements and landscape alterations in the scene.

Design and mitigation factors are also important to determining the PAC. Appropriate colours, materials, building forms, line, geometry, textures, scale, character and appearance of buildings and other structures are relevant to increasing PAC and decreasing prominence.

Other factors relevant to this assessment that affect the perception of visual effects are; view type (the nature of the composition that is; whether it is expansive, restricted, panoramic or a focal view), viewing period and viewing distance.

Viewing period

Viewing period in this assessment means the influence on the visual effects of the proposal in relation to the time available for a viewer to experience the view. It is assumed that the longer the potential viewing period, experienced either from fixed or moving viewing places such as dwellings, roads or the waterway, the higher the potential for a viewer to perceive the visual effects of the proposal. Repeated viewing period events, for example views repeatedly experienced from roads as a result of regular travelling, are considered to increase perception of the visual effects of the proposal.

I comment that all views assessed are close focal views from moving viewing situations but given the open nature of the site are potentially sustained across a distance of approximately 140 metres via the open southern section of the subject property boundary. The view from the north is available for a similar distance and therefore duration.

C.2 SCENIC QUALITY

Scenic quality relates to the likely expectations of viewers regarding scenic beauty, attractiveness or preference of the visual setting of the subject site and is baseline factor against which to measure visual effects. Criteria and ratings for preferences of scenic quality and cultural values of aesthetic landscapes are based on empirical research undertaken in Australia by academics including Terrance Purcell, Richard Lamb, Colleen Morris and Gary Moore.

Moore (2006) summarises the theoretical and methodological constructs in the field of environment, behaviour and society (EBS) and discusses the largest body of research in this area prepared by Associate Professor Terry Purcell and Dr Richard Lamb. The research details results in relation to the experience, perception and aesthetics of natural and cultural landscapes, affective experience of the environment, and the perception of scenic quality.

Therefore, analysis of the existing scenic quality of a site or its visual context and understanding the likely expectations and perception of viewers is an important consideration when assessing visual effects and impacts. The site would be considered in isolation and within its visual setting as having moderate-high scenic quality given its wide open green-spaces, vegetation and under development across the wider school site and subject site within it.

View Place Sensitivity (public views)

View place sensitivity refers to the importance of a view or view place in the public domain. View place sensitivity means a measure of the public interest in the view. The public interest is considered to be reflected in the relative number of viewers likely to experience the view from a publicly available location. Places from which there would be close or middle distance views available to large numbers of viewers from public places such as roads, or to either large or smaller numbers of viewers over a sustained period of viewing time in places such as reserves, beaches and walking tracks, are considered to be sensitive viewing places.

Viewer Sensitivity (private views)

Viewer sensitivity is a judgement as to the likely level of private interest in the views that include the proposed development and the potential for private domain viewers to perceive the visual effects of the proposal. The spatial relationship (distance) the length of exposure and the viewing place within a dwelling are factors which affect and overall rating as to the sensitivity to visual effects. The visual context section identifies surrounding residential dwellings that are located within the immediate visual catchment of the site. Fieldwork observations and Lidar data across the potential visual catchment have been used to determine the extent of external visibility of the built forms proposed from surrounding residences. The highest roof RL at the north-east corner of warehouse 3 was used as a marker in map the potential visual catchment. In this regard the dwelling potential most affected by visual effects (external views of any part of the built form proposed) is 1 Bakers Lane. A photomontage has been prepared to inform our analysis of the likely visual impacts on views from this dwelling.

C.3 VISUAL CATCHMENT

C.3.1 KEY FINDINGS

The potential visual catchment of the subject site is relatively constrained to the closest surrounding roads including Mamre Road for the length of its western boundary and a short section of Bakers Lane to the north. There is no visibility of the subject site or proposed development to either school located along the north side of Bakers Lane.

There is limited visibility of the subject site from the wider visual catchment to the west notwithstanding that elevated local topography east of the site are visible from more distant locations.

Lidar mapping of topography within and surrounding the site indicates that no part of the built form proposed is visible from the east side of Aldington Road including from isolated elevated dwellings for example 32A and 106 Aldington Road.

Isolated elevated dwellings located to the south-east along the west side of Aldington Road may be exposed to some oblique north-westerly views to parts of the site and potentially to the upper parts of some warehouses. We note that these lots are characterised by ornamental vegetation around the dwellings which may provide some screening of views and further that intervening undulating topography is likely to affect potential view access. Further, as described in the Section XX -visual context, these dwellings present to Aldington Road and are orientated towards the east so that views available in that direction will be unaffected by the proposed development.

Close views from Mamre Road will be available for a limited section of the road corridor and from moving viewing situations. Notwithstanding the close proximity of Mamre Road, intermittent vegetation located in the road reserve adjacent to the site's western boundary will offer some screening effects in those views to parts of the site.

Other than from Mamre Road, the subject site and built forms proposed are not visible from any high sensitivity view locations from which views would be direct or sustained for example national parks, reserves or schools.

The potential visual catchment extends to the west across the low lying landscape towards Twin Creeks Golf Course and associated residential development for example the east side of Medinah Avenue. Fieldwork observations confirm that visibility is limited to isolated views that are available between side setback between dwellings. The foreground of such views includes an electrical easement that is characterised by high voltage powerlines and lattice style pylons and a background composition that includes built forms that are not dissimilar in character and scale to those proposed.

C.4 ANALYSIS OF PHOTOMONTAGES

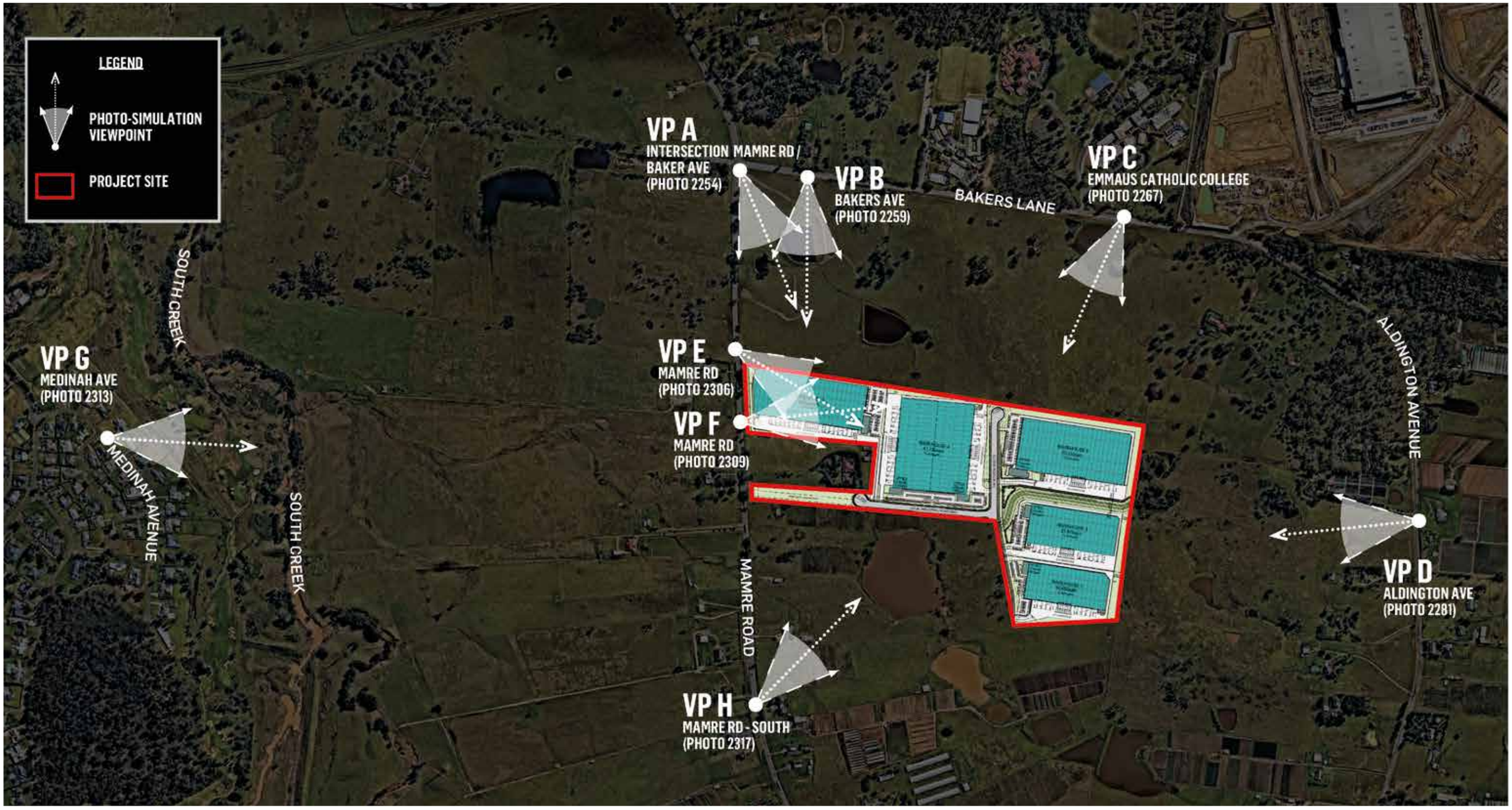
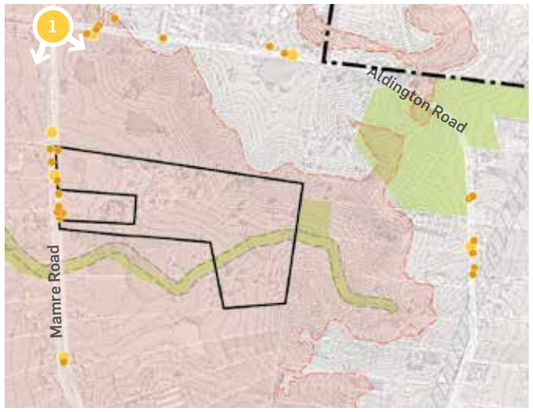


Figure 25 View Location Plan

VIEW 1 (VPA)

VIEW SOUTH-EAST FROM CORNER OF MAMRE ROAD AND BAKERS LANE TO THE SITE



View Location Reference Map

LEGEND

- **Site Boundary**
- Documented Photomontage Location
- All Photomontage Locations
- Key View Points
- **Visible Area**

Photo 30. Existing View 1 - View south-east from corner of Mamre Road and Bakers Lane to the site

Location & Distance Class

View 1.Expansive view south-east from corner of Mamre Road and Bakers Lane to the site

Existing composition of the view

The foreground of this view is predominantly characterised by pastoral grazing land of rural appearance. The foreground composition includes limited development and is relatively open in nature. The background horizon is formed by low undulating toppography, of rural character and includes isolated vegetation and areas of open sky. Parts of two low built forms are visible below the ridegline. The view includes a short section of Mamre Road. From this view place there is no access to views of high scenic quality, unique items or icons or heritage items.

Visual Effects of the proposed development

In the short term this view will largely remain unchanged. The foreground composition and rural visual character will remain during Stage 1. In time following establishment of Stage 1, a proposed long-low built form will occupy a narrow horizontal section of the mid-ground view. Part of the built form proposed that is visible beyond intervening landform will block a short section of a background view of veranuclar topography, isolated vegetaion, other built forms and a minor amount of open sky. The proposed development will not block access to areas of high scenic quality or particular icons or items.

Rating of visual effects of proposed Stage 1 DA on baseline factors (nil, low, medium and high)

Visual Character	Low
Scenic Quality of View	Low
View Composition	Low
Viewing Level	Nil
Viewing Period	Medium
Viewing Distance	Medium
View Loss & View Blocking Effects	Low

Rating of visual effects on variable weighting factors as low, medium or high

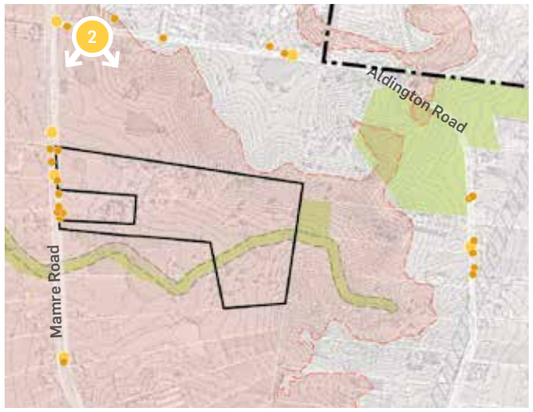
Public Domain View Place Sensitivity	Medium-high
Physical Absorption Capacity (PAC)	High
Compatability with visual urban and rural features in the composition	Medium
Compatability with strategic and regulatory framework - desired future character	High

Overall Rating of Significance of Visual Impact	**LOW**

Photo 31. Proposed View 1 - Visual effects of the proposed development

VIEW 2 (VPB)

VIEW TO SITE FROM 1 BAKERS LANE



View Location Reference Map

LEGEND

- **Site Boundary**
- Documented Photomontage Location
- All Photomontage Locations
- Key View Points
- **Visible Area**

Photo 32. Existing view 2 - View to the site from 1 Bakers Lane

Location & Distance Class

View 2. Expansive view to site from 1 Bakers Lane

Existing composition of the view

This is an expansive view looking towards the south west edge of the site. The foreground is characterised by relatively open pastoral land, scattered vegetation and further afield part of a water body. The distant composition includes topography which falls in elevation to low lying flatter land which is characterised isolated built forms for example some residential development and agri-business metal shed structures. Powerlines and stanchions which support these area visible feature above the line of vegetation. The distant background composition includes a long horizontal mountain ridgeline.

Visual Effects of the proposed development

Stage 1 built forms including Warehouses 1 and 3, entry roads etc are not visible in this view. Future stages of the development including parts of Warehouse 5 are visible beyond the water body and foreground pastoral landscape. The future built form is substantially set back from this view location and as such the visual character of the foreground will remain unaffected. The future built form will block a minor amount of background vegetation and buildings, with a roof height that sits below the height of the distant background ridgeline-horizon.

Rating of visual effects of proposed Stage 1 DA on baseline factors (nil, low, medium and high)

Visual Character	Low
Scenic Quality of View	Low-medium
View Composition	Low-medium
Viewing Level	Nil
Viewing Period	Low
Viewing Distance	Medium
View Loss & View Blocking Effects	Low-medium

Rating of visual effects on variable weighting factors as low, medium or high

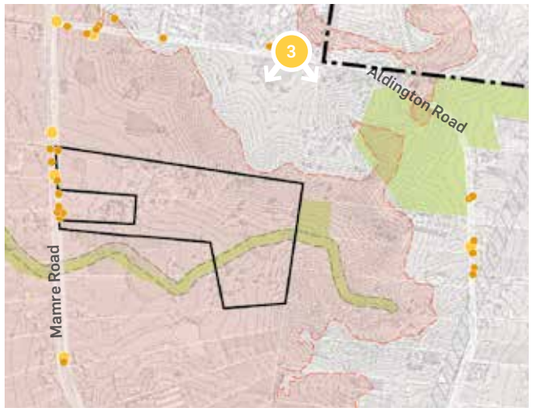
Public Domain View Place Sensitivity	Low-medium
Physical Absorption Capacity (PAC)	Medium
Compatability with visual urban and rural features in the composition	Medium
Compatability with strategic and regulatory framework - desired future character	High

Overall Rating of Significance of Visual Impact **LOW**

Photo 33. Proposed View 2 - Visual effects of the proposed development

VIEW 3 (VPC)

VIEW OF THE NORTH EASTERN CORNER OF SITE FROM BAKERS LANE NEAR EMMAUS CATHOLIC COLLEGE



View Location Reference Map

LEGEND

- **Site Boundary**
- Documented Photomontage Location
- All Photomontage Locations
- Key View Points
- **Visible Area**

Photo 34. Existing view 3 - View of the north eastern corner of site from Bakers Lane near Emmaus Catholic College

Location & Distance Class

View 3. Expansive view of the north eastern corner of site from Bakers Lane near Emmaus Catholic College

Existing composition of the view

The view from Bakers Lane to the subject site is constrained by topography, with views to the site blocked by a ridgeline. The predominant visual character is defined by open space of rural small holdings and pastoral landscapes. The view includes isolated residences and vegetation. An expanse of blue sky is visible above the top of the ridgeline, making up a large portion of the view.

Visual Effects of the proposed development

None of the built forms proposed within any stages of the proposed development will be visible from this location. There will be no visual effects or potential impacts on views from Bakers Lane from this vicinity.

Rating of visual effects of proposed Stage 1 DA on baseline factors (nil, low, medium and high)

Visual Character	Nil
Scenic Quality of View	Nil
View Composition	Nil
Viewing Level	Nil
Viewing Period	Nil
Viewing Distance	Nil
View Loss & View Blocking Effects	Nil

Rating of visual effects on variable weighting factors as low, medium or high

Public Domain View Place Sensitivity	Medium
Physical Absorption Capacity (PAC)	High
Compatability with visual urban and rural features in the composition	High
Compatability with strategic and regulatory framework - desired future character	High

Overall Rating of Significance of Visual Impact	**N/A**

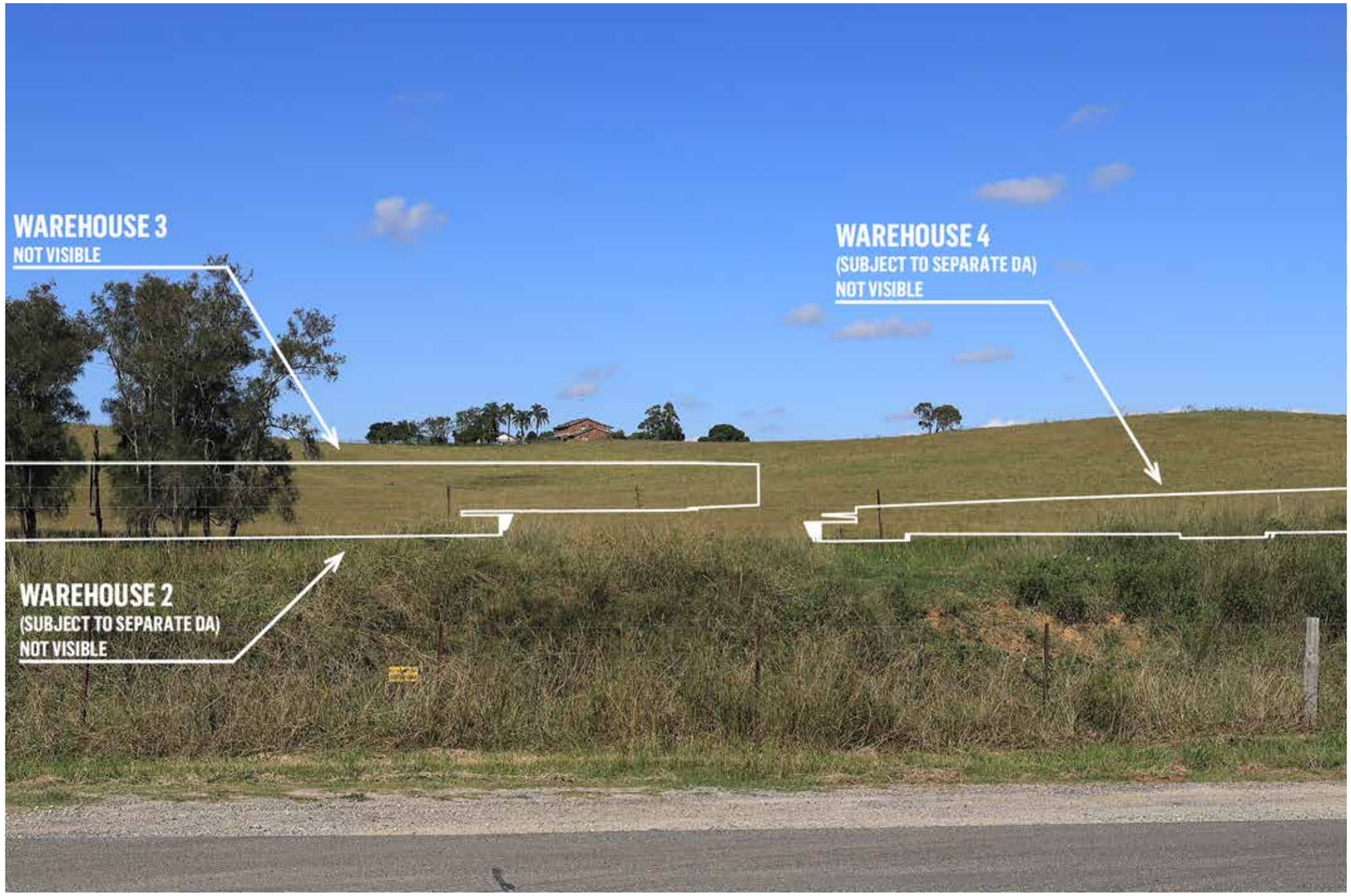
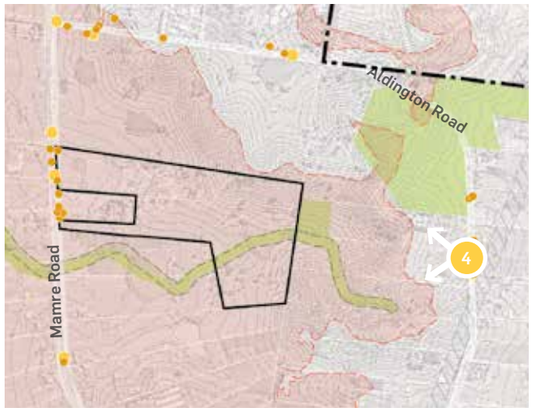


Photo 35. Proposed View 3 - Visual effects of the proposed development

VIEW 4 (VPD)

VIEW OF THE REAR OF SITE FROM ALDINGTON AVENUE



View Location Reference Map

LEGEND

- **Site Boundary**
- Documented Photomontage Location
- All Photomontage Locations
- Key View Points
- **Visible Area**

Photo 36. Existing view 4- View of the Rear of site from Aldington Avenue

Location & Distance Class

View 4. Expansive view of the rear of site from Aldington Avenue

Existing composition of the view

The existing view is characterised by an open pastoral landscape and vegetation.

Visual Effects of the proposed development

The view is orientated towards the proposed location of Warehouses 1,2, 3 and 4. However all potential views to the built forms proposed are blocked by intervening topgraphy.This view remains the same with no change.

Rating of visual effects of proposed Stage 1 DA on baseline factors (nil, low, medium and high)

Visual Character	Nil
Scenic Quality of View	Nil
View Composition	Nil
Viewing Level	Nil
Viewing Period	Nil
Viewing Distance	Nil
View Loss & View Blocking Effects	Nil

Rating of visual effects on variable weighting factors as low, medium or high

Public Domain View Place Sensitivity	Low-medium
Physical Absorption Capacity (PAC)	High
Compatability with visual urban and rural features in the composition	High
Compatability with strategic and regulatory framework - desired future character	High

Overall Rating of Significance of Visual Impact	**N/A**

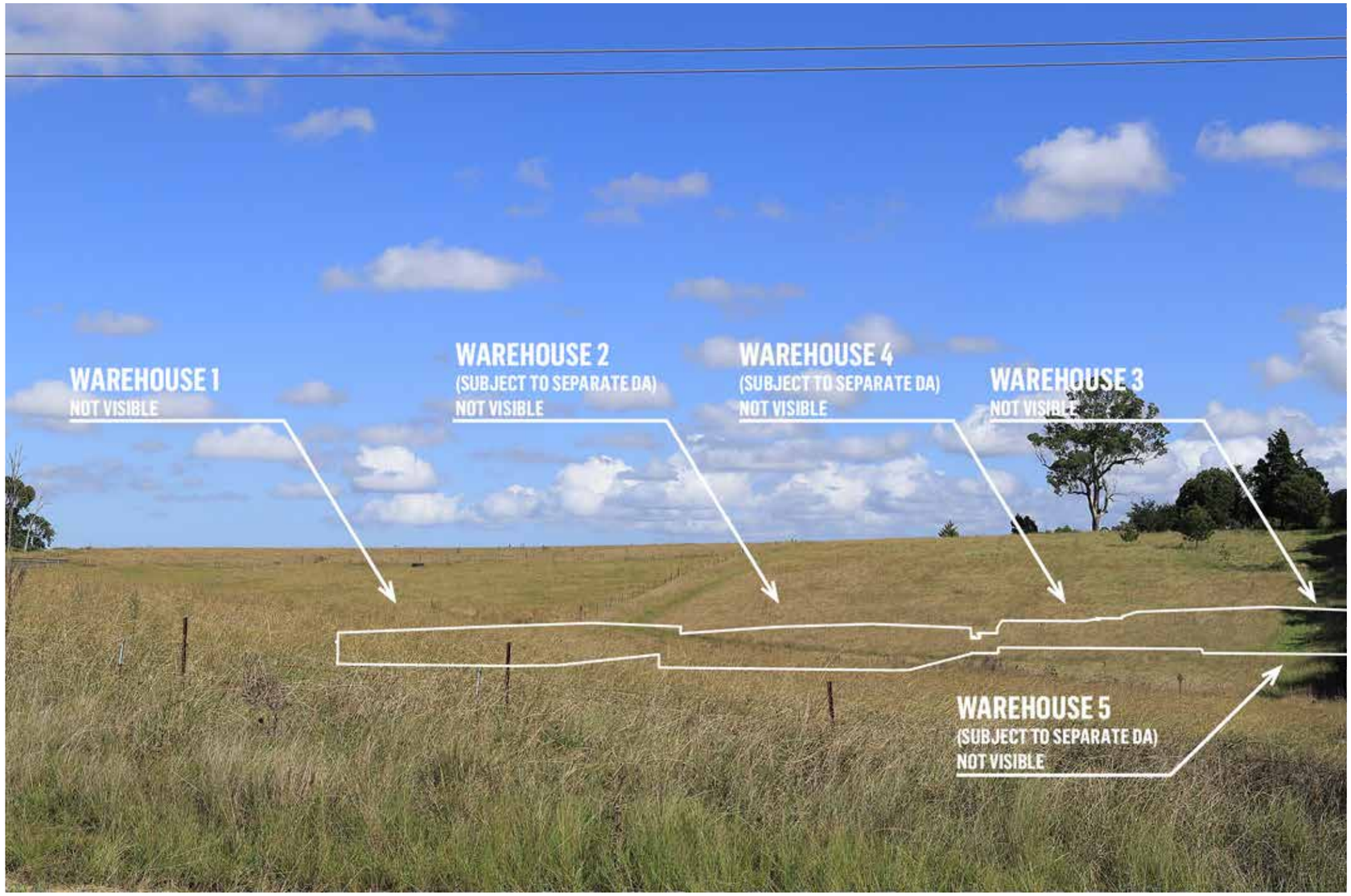
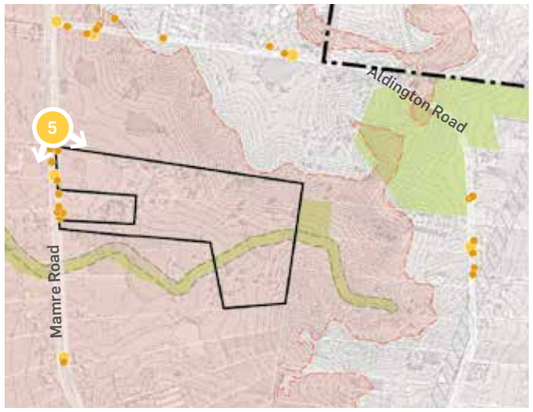


Photo 37. Proposed View 4 - Visual effects of the proposed development

VIEW 5 (VPE)

VIEW TOWARDS THE NORTH WESTERN BOUNDARY OF SITE



View Location Reference Map

LEGEND

- **Site Boundary**
- Documented Photomontage Location
- All Photomontage Locations
- Key View Points
- **Visible Area**

Photo 38. Existing view 5 - View towards the north western boundary of site

Location & Distance Class

View 5. Focal view towards the north western boundary of site

Existing composition of the view

This view includes relatively open and undulating topography of rural character which rises in elevation to the east. The foreground predominantly includes pastoral land, an isolated dwelling, rural sheds and structures and groups of trees. The background horizon is formed by a low local ridgeline. Notwithstanding the view is of topographical variety, it is typical of the wider visual context and vernacular visual rural character. From this view place there is no access to views of high scenic quality, unqiue items or heritage items .

Visual Effects of the proposed development

The majority of Stage 1 built forms will be blocked in time by the future development of Warehouse 4 and Warehouse 5, which is set close to Mamre Road. Warehouse 3 at the north-east corner of the site sits low in the landscape with a short section at its southern end rising above the local ridgeline to form a new horizon. This part of the site will be blocked in views from Mamre Road following construction of Warehouse 5. Retaining walls and internal roads will be visible post construction, where visibility will decrease over time given their relative elevation. The visual effects of this and the west elevation fo warehouse 5 will be partially mitigated following the installation of the proposed landscape planting.

Rating of visual effects of proposed Stage 1 DA on baseline factors (nil, low, medium and high)

Visual Character	Medium-high
Scenic Quality of View	Medium
View Composition	Medium-low (Stage 1)
Viewing Level	Nil
Viewing Period	Medium
Viewing Distance	Medium
View Loss & View Blocking Effects	High

Rating of visual effects on variable weighting factors as low, medium or high

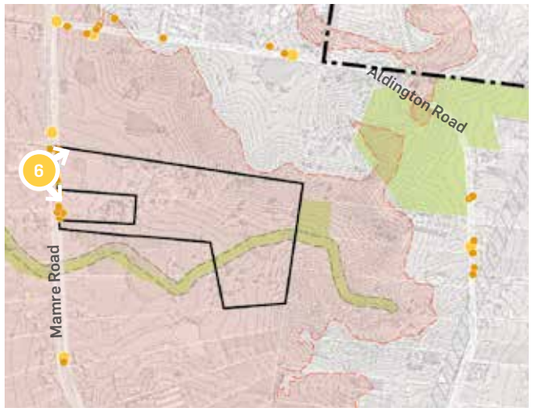
Public Domain View Place Sensitivity	High
Physical Absorption Capacity (PAC)	Low
Compatability with visual urban and rural features in the composition	Medium
Compatability with strategic and regulatory framework - desired future character	High

Overall Rating of Significance of Visual Impact	**MEDIUM-LOW**

Photo 39. Proposed View 5 - Visual effects of the proposed development

VIEW 6 (VPF)

VIEW TO EASTERN BOUNDARY OF THE SITE FROM MAMRE ROAD



View Location Reference Map

LEGEND

- **Site Boundary**
- Documented Photomontage Location
- All Photomontage Locations
- Key View Points
- **Visible Area**

Photo 40. Existing view 6 - View to eastern boundary of the site from Mamre Road

Location & Distance Class

View 6. View to eastern boundary of the site from Mamre Road

Existing composition of the view

This view includes the Mamre Road site frontage with an existing foreground characterised by rural-pastoral open space. The midground presents a rise in elevation due to the local spur which constrains the visual catchment from Mamre Road to the east. A line of vegetation sits between the open grass and the rise in elevation.

Visual Effects of the proposed development

The proposed retaining wall associated with future warehouse slab levels introduces a new continuous low horizontal form into the foreground view composition. This continuous built form will block views to Stage 1 buildings in the east of the site and is partly blocked by the raised turfed berm. The bern will be planted with a range of understoery and canopy species so that in time, the visual effects of the wall and potential future warehouse buildings will be partially screened in views from Mamre Road. The built form proposed will block part of the local spur, ridgeline and vegetation.

Rating of visual effects of proposed Stage 1 DA on baseline factors (nil, low, medium and high)

Visual Character	Medium-high
Scenic Quality of View	Medium
View Composition	High
Viewing Level	Nil
Viewing Period	Low
Viewing Distance	High
View Loss & View Blocking Effects	Medium-high

Rating of visual effects on variable weighting factors as low, medium or high

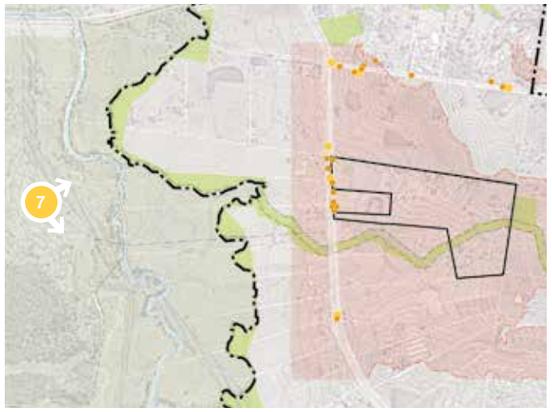
Public Domain View Place Sensitivity	High
Physical Absorption Capacity (PAC)	Low
Compatability with visual urban and rural features in the composition	Medium
Compatability with strategic and regulatory framework - desired future character	High

Overall Rating of Significance of Visual Impact	**MEDIUM-HIGH**

Photo 41. Proposed View 6 - Visual effects of the proposed development

VIEW 7 (VPG)

VIEW LOOKING EAST, MEDINAH AVENUE



View Location Reference Map

LEGEND

- Site Boundary
- Documented Photomontage Location
- All Photomontage Locations
- Key View Points
- Visible Area

Photo 42. Existing view 7 - View looking east, Medinah Avenue

Location & Distance Class

View 7. View opposite the southern boundary of 754-770 from north of the site

Existing composition of the view

The foreground is characterised by low density residential development, wide side setbacks and long distance views to rural landscapes. Mid-ground vegetaion blocks direct access to Mamre Road, but the distant background includes elevated parts of the subject site and local spur and ridgeline.

Visual Effects of the proposed development

The built forms proposed are of low visibility in this view, where Stage 1 buildings are screened by intervening vegetation. The visual effects of the proposed development are therefore limited.

Rating of visual effects of proposed Stage 1 DA on baseline factors (nil, low, medium and high)

Visual Character	Low
Scenic Quality of View	Low
View Composition	Low
Viewing Level	Nil
Viewing Period	High
Viewing Distance	Low
View Loss & View Blocking Effects	Low

Rating of visual effects on variable weighting factors as low, medium or high

Public Domain View Place Sensitivity	Low
Physical Absorption Capacity (PAC)	High
Compatability with visual urban and rural features in the composition	High
Compatability with strategic and regulatory framework - desired future character	High

Overall Rating of Significance of Visual Impact	**LOW**

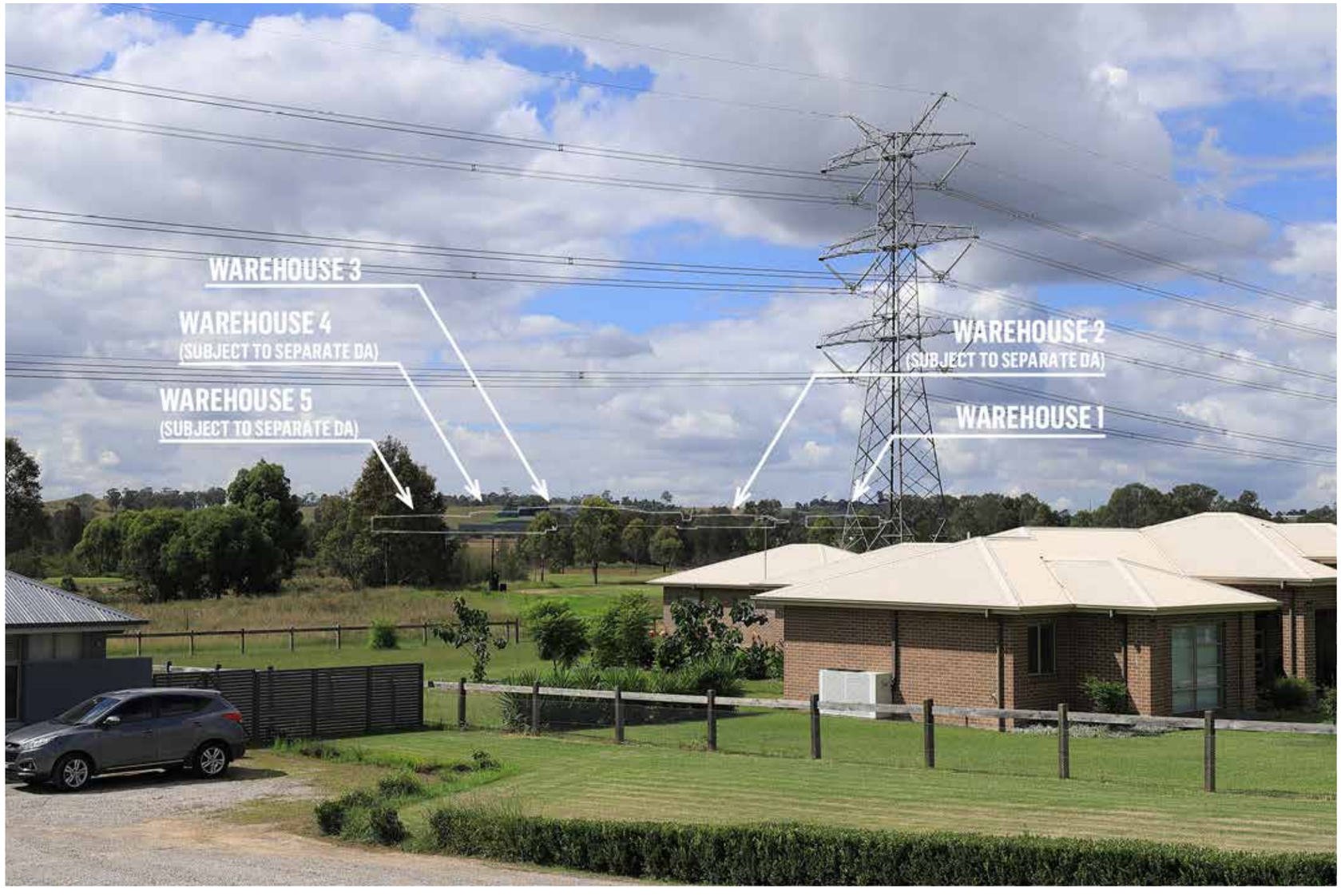
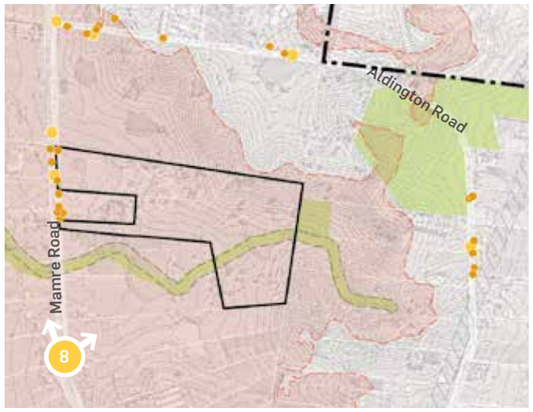


Photo 43. Proposed View 7 - Visual effects of the proposed development

VIEW 8 (VPH)

VIEW OF THE SITE FROM THE SOUTH



View Location Reference Map

LEGEND

- **Site Boundary**
- Documented Photomontage Location
- All Photomontage Locations
- Key View Points
- **Visible Area**

Photo 44. Existing view 8 - View of the site from the south

Location & Distance Class

View 8. View of the site from the south

Existing composition of the view

This view is predominately characterised by open, flat pastoral grazing land enclosed by a local ridgeline with scattered clumps of vegetation and an isolated single-storey dwelling. This is a representative view of the kind available from Mamre Road approaching the site from the south and could be described as typical or vernacular in relation to the local visual context. Elevated topography along the eastern margins of the site form the local visual horizon.

Visual Effects of the proposed development

In the short term, this foreground of this view will remain largely unchanged in terms of composition and rural visual character. The builtings proposed in Stage 1 introduce long, low built forms which will occupy a narrow horizontal section of the mid-ground view but sit below the ridgeline/vegetation horizon. The proposed development will not block access to areas of high scenic quality or the existing natural horizon.

Rating of visual effects of proposed Stage 1 DA on baseline factors (nil, low, medium and high)

Visual Character	Medium
Scenic Quality of View	Low-medium
View Composition	Medium
Viewing Level	Nil
Viewing Period	High
Viewing Distance	Medium
View Loss & View Blocking Effects	Low

Rating of visual effects on variable weighting factors as low, medium or high

Public Domain View Place Sensitivity	High
Physical Absorption Capacity (PAC)	Low-medium
Compatability with visual urban and rural features in the composition	High
Compatability with strategic and regulatory framework - desired future character	High

Overall Rating of Significance of Visual Impact	**LOW-MEDIUM**

Photo 45. Proposed View 8 - Visual effects of the proposed development

C.5 REGULATORY CONTEXT

C.5.1 PENRITH LOCAL ENVIRONMENTAL PLAN 2010

The site is located 1.5 km east of 'Land with Scenic and Landscape Values' under the PLEP 2010. South Creek to the east of the subject site is identified as an area of 'Regional Significance'. Clause 7.5 Protection of scenic character and landscape values identifies the following objectives:

a) to identify and protect areas that have scenic value either from major roads, identified heritage items or other public places; and

b) to ensure development in these areas is located and designed to minimise its visual impact.

Urbis Comment

As the proposal is located 1.5km away from areas identified as 'land with scenic and landscape values', the distance means the proposal has no impact on this specified value area. The views available from Mamre Road, a high traffic road in the area, are affected by the proposal. The views effected however are not dissimilar to those elsewhere along Mamre Road.

The visual catchment from South Creek in the east remains the same as the ridgeline on the north eastern edge of the site blocks any new built form from being seen from areas east of the site. This is seen in Views 3 and 4.

C.5.2 PENRITH LANDSCAPE CHARACTER STRATEGY (2006)

Penrith City Council's Landscape Character Strategy (2006) also identifies the site has been identified as part of the following Landscape Character Statements:

Iconic Places

Rural Backdrops - productive agricultural and pastoral landscapes, rural residences and villages that are located to the north and the south of the City's urban lands;

Rural

Pastoral Settings - defined as larger rural holdings across the City's southern ridges and plateaux that have been cleared substantially and have been developed primarily as pastures, but also accommodating a variety of rural industries such as poultry sheds.

Urbis Comment

The proposal is consistent with current zoning as specified in the PLEP 2010, and as such the presence of warehouses can be expected. The presence of the warehouses may affect the rural backdrops and pastoral settings of the area. However, as the site was part of the Mamre Road Precinct which was zoned predominately IN1 Genral Industrial in 2020, this rural setting has already begun to evolve, with sites adjacent to and located near the site subject to warehouse development and applications for development. As such this proposal is not dissimilar to what could be expected for development in the area.

C.6 VIEWS ANALYSIS

C.6.1 VISUAL EFFECTS OF PROPOSED DEVELOPMENT

Visual character of the site

The existing site is gently undulating, relatively flat land and of rural character. The eastern boundary of the site includes has a low local ridgeline that has a short spur which projects into the site in the north-eastern corner. These features enclose the site to the north and east, constraining the visual catchment. The primary frontage of the site is to Mamre Road which runs from north to south along the the western site boundary. The site is predominantly characterised by flat areas of pastoral grazing land with scattered vegetation along the ridgeline near the rear north-eastern part of the site. Built form on the existing site is limited to typical rural features including wire fencing, metal poles and electrical wires above this. It also includes one brick and tile dwelling at the upper corner of the site which will be demolished as part of the proposed development.

Streetscape Character

The Mamre Road streetscape in the vicinity of the site is characterised by open paddocks of rural-pastoral character and existing large-scale bulky warehouses. The west side of Mamre Road south-west of the site includes some horticultural enterprises and storage facilities which are characterised by built forms that are long such as glass houses or by open expanses of hard standing and stacked materials.

Bakers Lane includes less bulky development and more open and undulating pastoral landscapes including two schools. Aldington Road to the east is predominantly characterised by individual and well-spaced dwellings on large lots used for agricultural or horticultural purposes.

We note that the streetscape character is likely to change significantly in line with the underlying strategic planning context of the WSEA and its associated SEPP.

Effects on Visual Character

The visual effects of the proposed development on the existing character of the site and surrounds will be significant given its transformation to accommodate employment land uses under the WSEA SEPP. The SEPP allows for the development of built forms and ancillary features for example industrial sub-divisions with large bulky warehouses, distribution centres, access roads, hard stand and parking. Therefore, significant visual change to the existing visual character of the site and streetscape character of surrounding roads is anticipated by controls including in the SEPP. For example large scale, tall bulky storage and distribution warehouses would not eb unexpected new built forms into the visual landscape.

Scenic Quality

The effect of the proposed development on scenic quality of the site would be rated as low to medium as the proposal does not have a negative effect on features that are associated with high scenic quality. The site does not hold anything unique or scenically important, with visual characteristics of the site similar to those in the surrounding visual environment.

Effects on scenic quality

The proposal would have a significant effect on the scenic quality of the site. As the visual catchment of the site is relatively constrained to the western boundary and a short section of Baker's Lane. Scenic quality of views from the north to east will have little to no impact due to existing intervening topography. Scenic quality will be affected more on the western boundary. In expansive views the proposal would block long horizontal areas in the midground, though large areas of pastoral grazing land, vegetation and open sky would still visible. In feature views, particularly from the frontage of Mamre Rd, the proposal would have a medium effect on scenic quality, with the warehouses becoming large components of the views. However, pastoral grazing land and open sky will still be visible.

View place sensitivity

Public domain viewing places to the proposed developments are generally restricted to the users of Mamre Road. Users are typically in moving vehicles and only see the subject site for a small period of time as one is passing the site.

Viewer sensitivity

There are a limited number of residential dwellings located within the immediate visual catchment of the subject site that would be exposed to potential views of the proposed development. The photomontages show 2 viewpoints where residents of nearby dwellings may have views towards the proposed built form on the site. The viewpoint from Menindah Avenue is greater than 500m away and is mostly obscured by vegetation, which also affords it a higher PAC. The viewpoint from the southern edge of the site sits around 500m from the subject site, impacts on views from this residence are at a medium level. The view composition is altered, however within the view blocked there are no significant features.

Residences 500m or more away from the site that have views towards the development are either blocked entirely by intervening topography or are mostly obscured by ridgelines.

Effects on sensitivity

The proposed development has a low view place sensitivity. Public domain views are perceived mainly by users of Mamre Road and only for a short time, usually in moving vehicles. Effects on viewer sensitivity are also of low-medium impact due to distance from the subject site, higher PAC and significance of the features that may be blocked by the proposed form.

C.6.2 VARIABLE FACTORS

Effects on Composition

The view composition across all views is generally pastoral grazing lands in the foreground. The foreground is mainly unaffected, with most change predominantly within the midground of most views. In most views to the site the midground consists of a change in slope with some vegetation and scattered built form. The proposed built form will have an effect on composition in the midground as it will block parts of views to vegetation and some built form. The background is largely open sky, obscured in some views by electrical wires passing through. Overall, the background of open blue sky is not blocked to a great extent, with only thin portions of sky blocked just above the midground.

Relative viewing level

The surrounding area is relatively flat, with land on the subject site rising to a ridgeline. This means that views to the site are blocked on the north eastern edge of the site. Viewing level from the western boundary along Mamre Road is not elevated and does not provided an enhanced viewing platform.

Viewing period

The western boundary of the site fronts Mamre Road and as such most of the views will be restricted to views of short duration from moving vehicles. All other boundaries are adjacent to rural lots that have limited areas where there would be an extended viewing period as they are used for agricultural and horticultural operations.

Viewing distance

The modelled views used for analysis are all in the short to medium distance range between 100-500m from the subject site. Notwithstanding that parts of the visual catchment to the west extend to approximately 1000m to include the residential development at Twins Creeks Golf Club. This distance enables for greater land barriers such as ridgelines and vegetation which screen views. Views analysed that are closer are for shorter viewing periods, consisting mainly of glimpses from moving vehicles and as such have a lower impact. From the residential potential sustained viewpoints which may have sustained views to the proposed development, the built form is either obscured by vegetation, minimising any impact on views with a high PAC, or, where the view is blocked by the proposed form, it does not block any significant features.

View blocking

The proposed development would not cause significant view loss or blocking of views as modelled, except in two close views from Mamre Road where warehouses have a smaller setback to the primary road. These may block views east into the site towards the eastern boundary ridgeline. Scenic features beyond the site would not be blocked or lost. The buildings proposed would predominantly replace views of open paddocks, undulating undeveloped topography and isolated vegetation.

PREPARATION OF PHOTOMONTAGES

BASE PHOTOGRAPHS AND FOCAL LENGTHS

The camera images for the photomontages are of sufficient resolution taken with a lens of low distortion. The focal length of the lens used is appropriate for the purpose and has been standardised at 35mm FL.

The reasons for using a specific focal length is determined by the vertical and horizontal scale of the subject of the view as well as the need to minimise apparent distortion of the images. The subject of the views commonly contains elements of vastly different horizontal and vertical scale, all of which must ideally be visible in each photograph.

The requirements to demonstrate the accuracy of a photomontage are outlined in the practice direction for use of visual aids in the Court. This is used as a guide for compliance and to establish the accuracy of photomontages in the absence of any other statutory guidelines in NSW. The method used to prepare the photomontages for this project broadly follows the Land and Environment Court of New South Wales direction. Whilst the view places were not surveyed independently, the camera's in-built GPS X,Y and Z coordinates, known focal length and Lidar point cloud survey data across or the site has been used to cross check alignment and insertion of the architectural model. A method statement for the preparation of photomontages is included below.

PHOTO-SIMULATIONS PREPARED BY:

Urbis, Level 10, 477 Collins Street, MELBOURNE 3000.

DATE PREPARED:

June 2021

VISUALISATION ARTIST:

Ashley Poon, Urbis – Lead Visual Technologies Consultant

Bachelor of Planning and Design (Architecture) with over 15 years' experience in 3D visualisation

LOCATION PHOTOGRAPHER :
Jane Maze-Riley, Urbis - Associate Director, National Design

CAMERA:

The western boundary of the site fronts Mamre Road and as such most of the views will be restricted to views of short duration from moving vehicles. All other boundaries are adjacent to rural lots that have limited areas where there would be an extended viewing period as they are used for agricultural and horticultural operations.

CAMERA LENS AND TYPE:

Canon EF24-105mm f/3.5-5.6 IS STM

SOFTWARE USED :
3DSMax 2022 with Arnold 4.0 (3D Modelling and Render Engine)
AutoCAD 2021 (2D CAD Editing)
Globalmapper 22 (GIS Data Mapping / Processing)
Photoshop CC 2021 (Photo Editing)

DATA SOURCES :
Point cloud and Digital Elevation Models from NSW Government Spatial Services datasets - Penrith 2019-07
Aerial photography from Nearmap - 2021-03-26
Site survey data received via Architect - 2021-05-11
Proposed 3D Landform model received via Architect - 2021-05-19
Proposed 3D massing model received from Architect - 2021-05-19
Proposed landscape plan received from Landscape Architect - 2021-06-01

METHODOLOGY

Photo-simulations have been produced with a high degree of accuracy to comply with the requirements as set out in the practice direction for the use of visual aids in the Land and Environment Court of New South Wales. The location of the camera position is captured by in-built GPS system and can be cross checked given that the focal length for each photograph is known.

The use of Lidar point cloud data provides multiple X, Y and Z survey data in relation to fixed features in the landscape and that are also captured in each view composition (photograph) for example light poles, roof ridgelines , fence post and some vegetation. These features are used as visual markers to insert and align the 3D architectural model into the base photograph noting that the model includes its own anchor points that relate to subject site survey. In this way the multiple point cloud data points available are the equivalent to having the view places independently surveyed as is typically required for visual aids that are to be relied upon in the Land and Environment Court of New South Wales.

The process for producing these photo-simulations are outlined below:

Photographs have been taken on site using a full-frame GPS enabled digital camera coupled with a quality lens in order to obtain high resolution photos whilst minimising image distortion. Photos are taken hand-held and at a standing height of 1.6m above natural ground. Photos have generally been taken at 35mm to cover a wider context, with a 50mm reference window provided to assist with standardising the set for a standard view. A photo taken using the 50mm focal length on a full-frame camera (equivalent to 40° horizontal field-of-view / 46.8° diagonal field-of-view) is an accepted photographic standard to approximate human vision. However in some circumstances in order to include sufficient visual context or to accommodate the size and scale of the proposed built form from particular view places and in particular compositions a wider FL must be used for example in this case 35mm.

Using available geo-spatial data for the site, including independent site surveys, aerial photography, digital elevation models and LiDAR point-clouds, the relevant datasets are validated and combined to form a geo-referenced base 3D model from which additional information, such as proposed architecture, landscape and photographic viewpoints can be inserted.

Layers of the proposed development are obtained from the designers as digital 3D models and 2D plans. All drawings/models are verified and registered to their correct geo-location before being inserted into the base 3D model.

For each photo being used for the photo-simulation, the GPS location, camera, lens, focal length, time/date and exposure information is extracted, checked and replicated within the 3D base model as a 3D camera. A camera match is created by aligning the 3D camera with the 3D base model against the original photo, matching the original photographic location, orientation.

From each viewpoint, a reference 3D model camera match is generated to verify an accurate match between the base 3D model (existing ground survey/vegetation etc) and original photo. A 3D wireframe image of the 3D base model is rendered in the 3D modelling software and composited over the original photo using the photo-editing software.

From each viewpoint, the final photo-simulation is then produced by compositing 3D rendered images of the proposed development into the original photo with editing performed to sit the render at the correct view depth. Photographic elements are cross-checked against the 3D model to ensure elements such as foreground trees and buildings that may occlude views to the proposed development are retained. Conversely, where trees/buildings may be removed as part of the proposal, these are also removed in the photo-simulation.

A full report with all modelled views is available in **Attachment A1 Visual Assessment - Photo Simulations**.

CERTIFICATION OF ACCURACY

The method of preparation outlined above has enabled a 3D virtual version of the site to be created in CAD software. In this regard it has been possible to insert the selected photo into the background of the 3d view, position the 3d camera according to GPS meta data and then rotate the camera around until the surveyed 3d points match up with the correlating real world objects visible in the photo. This is a self-checking mechanism – if the camera position or the survey data is out by even a small distance then good fit cannot be achieved. A 100% 'perfect fit' cannot occur for the following reasons:

- Variance between measured focal length compared to stated focal length,
- Minor lens distortion which varies from lens to lens and manufacturer to manufacturer,
- Absence of a suitable range of reference points on site/visible through lens (although in this case an acceptable number of points have been used)
- Allowing for these limitations, Virtual Ideas demonstrated that the alignment was achieved to a high degree of accuracy.

The accuracy of the locations of the 3D model of the proposed development with respect to the photographic images was checked by Urbis in multiple ways:

1. The model was checked for alignment and height with respect to the 3D survey and adjacent surveyed reference markers which are visible in the images.
2. The location of the camera in relation to the model was established using the survey model and the survey locations, including map locations and RLs. Focal lengths and camera bearings in the meta data of the electronic files of the photographs are known.
3. Reference points from the survey were used for cross-checking accuracy in all images.
4. No significant discrepancies were detected between the known camera locations and those predicted by the computer software. Minor inconsistencies due to the natural distortion created by the camera lens, were reviewed by myself and were considered to be within reasonable limits.

I am satisfied that the photomontages have been prepared in accordance with the Land and Environment Court of New South Wales practice direction.

I certify, based on the methods used and taking all relevant information into account, that the photomontages are as accurate as is possible in the circumstances and can be relied upon by the Court for assessment.

CONCLUSIONS

- The local and wider visual context is characterised by rural-pastoral landscapes, intermittent residential dwellings and a number of industrial warehouse developments to the north and north-west.
- Industrial and warehouse developments within the visual context of the site are characterised by tall bulky forms, steel cladding and large areas of hardstand for vehicular movement.
- The majority of the existing visual context falls within the WSEA that is subject to General Industrial development landuse zone and therefore the site and its visual context and character are subject to significant potential change.
- The proposed development includes built forms of the height, form and character that are envisaged under those controls and strategic objectives. Therefore the resultant change in visual character is anticipated.
- The potential visual catchment is limited to the north and east by elevated topography in relation to public roads including Bakers Lane and Aldington Road to the east and includes a limited number of private dwellings.
- Lidar mapping and fieldwork inspections confirm that the built forms proposed as part of Stage 1 and further stages will not be visible or highly visible from any close private domain viewing locations.
- The proposed development will be most visible in close views from Mamre Road and from the west end of Bakers Lane.
- Stage 1 warehouses will not be visible from Bakers Lane but such views from the intersection with Mamre Road may include parts of the retaining walls and civil works proposed along the north boundary of the site in relation to vehicle entry and internal roads.
- Views from Mamre Road as shown in photomontage views 5 and 6 show that the most Stage 1 works including Warehouse 3 are of limited visibility and further that the intensive planting proposed including along the creek corridor and boundaries, will in time help screen the proposed development including Warehouse 3.
- The two tiered retaining wall structure associated with future floor slabs for Warehouse 5 will be visible in close direct views from Mamre Road. Once established, proposed understorey planting and tree species to this batter will provide visual screening of the built forms proposed.
- Successfully established and maintained vegetation along the berm and site frontage will help mitigate the visual effects of the Stage 1 works and further stages, and will reduce the visual impacts of the proposal on views and the existing landscape character in time.
- Overall, considering the mitigative effects of proposed planting and the strategic planning and zoning context of the site, in our opinion the visual impacts of Stage 1 works are acceptable and can be supported on visual impact grounds.

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APPENDIX 1

SEARS COMPLIANCE TABLE

REFERENCE	REQUIREMENTS	RESPONSE
a. Key issues - Urban Design and Visual	A detailed design and options analysis of the development including diagrams, illustrations and drawings with reference to the built form, height, setbacks, bulk and scale in the context of the immediate locality, the wider area and the desired future character of the area, including views, vistas, open space and the public domain with consideration of Clause 31 of WSEA SEPP.	– Refer to pages 10-18 and 31-35
	A visual impact assessment (including photomontages and perspectives) of the development layout and design (buildings and storage areas), including staging, site coverage, setbacks, open space, landscaping, height, colour, scale, building materials and finishes, façade design, signage and lighting, particularly in terms of potential impacts on: nearby public and private receivers, significant vantage points in the broader public domain, Mamre Road, and the riparian corridor on site.	– Refer to pages 39-62
	Consideration of the layout and design of the development having regard to the surrounding vehicular, pedestrian and cycling networks.	– Refer to page 12
	Detailed landscape plans.	– Refer to page 36

APPENDIX 2

PHOTOMONTAGE PREPARATION AND METHOD BY URBIS

APPENDIX 3

DESCRIPTIONS OF VISUAL EFFECTS AND IMPACTS

This information has been prepared by Richard Lamb and Associates and has been reproduced here with the permission of Dr Richard Lamb.

The descriptions below have been used as a guide to make judgments in relation to the effects and impacts of the proposed development on each modelled views.

Table 1: Description of Visual Effects

Factors	Low Effect	Medium Effect	High Effect
Scenic quality	The proposal does not have negative effects on features which are associated with high scenic quality, such as the quality of panoramic views, proportion of or dominance of structures, and the appearance of interfaces.	The proposal has the effect of reducing some or all of the extent of panoramic views, without significantly decreasing their presence in the view or the contribution that the combination of these features make to overall scenic quality.	The proposal significantly decreases or eliminates the perception of the integrity of any of panoramic views or important focal views. The result is a significant decrease in perception of the contribution that the combinations of these features make to scenic quality.
Visual character	The proposal does not decrease the presence of or conflict with the existing visual character elements such as the built form, building scale and urban fabric.	The proposal contrasts with or changes the relationship between existing visual character elements in some individual views by adding new or distinctive features but does not affect the overall visual character of the precinct's setting.	The proposal introduces new or contrasting features which conflict with, reduce or eliminate existing visual character features. The proposal causes a loss of or unacceptable change to the overall visual character of individual items or the locality.
View place sensitivity	Public domain viewing places providing distant views, and/or with small number of users for small periods of viewing time	Medium distance range views from roads and public domain areas with medium number of viewers for a medium time (a few minutes or up to half day-	Close distance range views from nearby roads and public domain areas with medium to high numbers of users for most the day (as explained in
Viewing period	Glimpse (eg moving vehicles).	Few minutes to up to half day (eg walking along the road, recreation in adjoining open space).	Majority of the day (eg adjoining residence or workplace).
Viewing distance	Distant Views (>1000m).	Medium Range Views (100-1000m).	Close Views (<100m).
View loss or blocking effect	No view loss or blocking.	Partial or marginal view loss compared to the expanse/extent of views retained. No loss of views of scenic icons.	Loss of majority of available views including loss of views of scenic icons.

Table 2: Description of Visual Impacts

Visual Impacts Factors			
Factors	**Low Impact**	**Medium Impact**	**High Impact**
Physical absorption capacity	Existing elements of the landscape physically hide, screen or disguise the proposal. The presence of buildings and associated structures in the existing landscape context reduce visibility. Low contrast and high blending within the existing elements of the surrounding setting and built form.	The proposal is of moderate visibility but is not prominent because its components, texture, scale and building form partially blend into the existing scene.	The proposal is of high visibility and it is prominent in some views. The project has a high contrast and low blending within the existing elements of the surrounding setting and built form.
Compatibility with urban/natural features	High compatibility with the character, scale, form, colours, materials and spatial arrangement of the existing urban and natural features in the immediate context. Low contrast with existing elements of the built environment.	Moderate compatibility with the character, scale, form and spatial arrangement of the existing urban and natural features in the immediate context. The proposal introduces new urban features, but these features are compatible with the scenic character and qualities of facilities in similar settings.	The character, scale, form and spatial arrangement of the proposal has low compatibility with the existing urban features in the immediate context which could reasonably be expected to be new additions to it when compared to other examples in similar settings.

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