PROJECT APOLLO DATA CENTRE (4-10 TALAVERA ROAD, MACQUARIE PARK).

VISUAL IMPACT ASSESSMENT

PREPARED FOR
GOODMAN
FEBRUARY 2025
FINAL

URBIS

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We acknowledge Aboriginal and Torres Strait Islanders as the traditional custodians of all the lands throughout Australia. We recognise and respect the connection to their land, cultural heritage and community, and we pay respects to their Elders past, present and emerging.

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EXECUTIVE SUMMARY

This Visual Impact Assessment has been prepared by Urbis to accompany a State Significant Development Application (SSDA) for the construction and ongoing operation of a data centre facility at 4-10 Talavera Road, Macquarie Park in the Ryde Council Local Government Area (LGA). The site is legally described as Lot 11 in Deposited Plan 733881, Lot 4 in Deposited Plan 1031467 and Lots 10 and 11 in Deposited Plan 883750.

The site is located within the Macquarie Park Corridor, a significant economic and employment precinct in Sydney's North District and within the E3 Productivity Support zone under the *Ryde Local Environmental Plan 2014.*

Desktop analysis and fieldwork observations found that:

- The visual catchment of the site is predominantly restricted to close views from the south, east and north-east, and intervening built form from within the surrounding business park developments limits views towards the site.
- The proposal is most visible in close views from the immediately surrounding streetscape, particularly Talavera Road and Lane Cove Road bordering the southern and eastern edges of the site.
- Of the 4 public domain views assessed, three were rated as low visual impact and one as medium-low visual impact.

Analysis of the proposal found that:

- The proposed development has high compatibility with the existing visual character surrounding the site which is characterised by built-form with large floorplates and varied bulk and scale consistent with a highly urbanised location and business core.
- The built form proposed does not generate any significant visual impacts on the view compositions analysed and does not block views of any scenic or highly valued features in the landscape.

Residential views towards the site are limited by intervening built-form and vegetation.

Indicative potential views from the closest and potentially most affected residential dwellings at Macquarie Gardens were investigated using drone photography and a photomontage and found that:

- The effects on the visual character and scenic quality of potential residential views were found to be low and acceptable.

Urbis concludes that the proposed Data Centre will not result in any significant visual effects or impacts on the existing visual context or catchment.

On balance when all relevant matters are considered, the visual effects and view impacts caused by the proposed development are considered to be reasonable and acceptable and as such the proposal can be supported on visual impact grounds.

01 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This Visual Impact Assessment has been prepared by Urbis to accompany a State Significant Development Application (SSDA) for the construction and ongoing operation of a data centre facility at 4-10 Talavera Road, Macquarie Park in the Ryde Council Local Government Area (LGA). The site is legally described as Lot 11 in Deposited Plan 733881, Lot 4 in Deposited Plan 1031467 and Lots 10 and 11 in Deposited Plan 883750.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the Project Apollo Data Centre Project (SSD-74069708) dated 2 August 2024.

Table 1 - SEAR's requirements.

Description of Requirement	Report Reference
5. Visual Impact	
• Provide a visual analysis of the development from key viewpoints, including photomontages or perspectives showing the proposed and likely future development. • Where the visual analysis has identified potential for significant visual impact, provide a visual impact assessment that addresses the impacts of the development on the existing catchment.	• Section 4.0 & 5.0.

1.2 PROJECT BACKGROUND

In February 2023, an SSDA for a warehouse development was lodged at 4-38 Talavera Road, Macquarie Park. Specifically, the SSDA sought consent for:

- Eastern portion at 4-10 Talavera Road ("Stage 1") – a two-storey warehouse building envelope with ancillary mezzanine offices and ground floor café, with a maximum height of 30m and a total GFA of approximately 23,120sqm.
- Western portion at 12-38 Talavera Road ("Stage 2") – a two-storey Goodman owned warehouse building envelope with a four-storey shared office component, ancillary mezzanine office spaces and cafe. The majority of the building envelope will have a maximum height of 30m for this portion of the site, with the small exception of the western corner of Building B which will exceed the 30m height limit by 2.4m.
- A 10m landscape building setback to both Talavera Road and the northern property boundary, and a 5m landscape building setback to Lane Cove Road.
- Removal of 243 trees across the site and retention of 267 trees. Approximately 18 replacement trees are proposed within the Stage 1 site.
- Provision of a stepped two-storey basement comprising 226 car parking spaces and 50 motorcycle spaces;
- Two site access driveways – one to the basement carpark and one for larger service vehicle access; and
- Site landscaping works including a total of 5,200 sqm (22.4% of the Stage 1 site).

SSD-46011220 has since been withdrawn. Notwithstanding, the feedback received from DPHI, Council and key stakeholder agencies has been incorporated into the design of the proposed development.

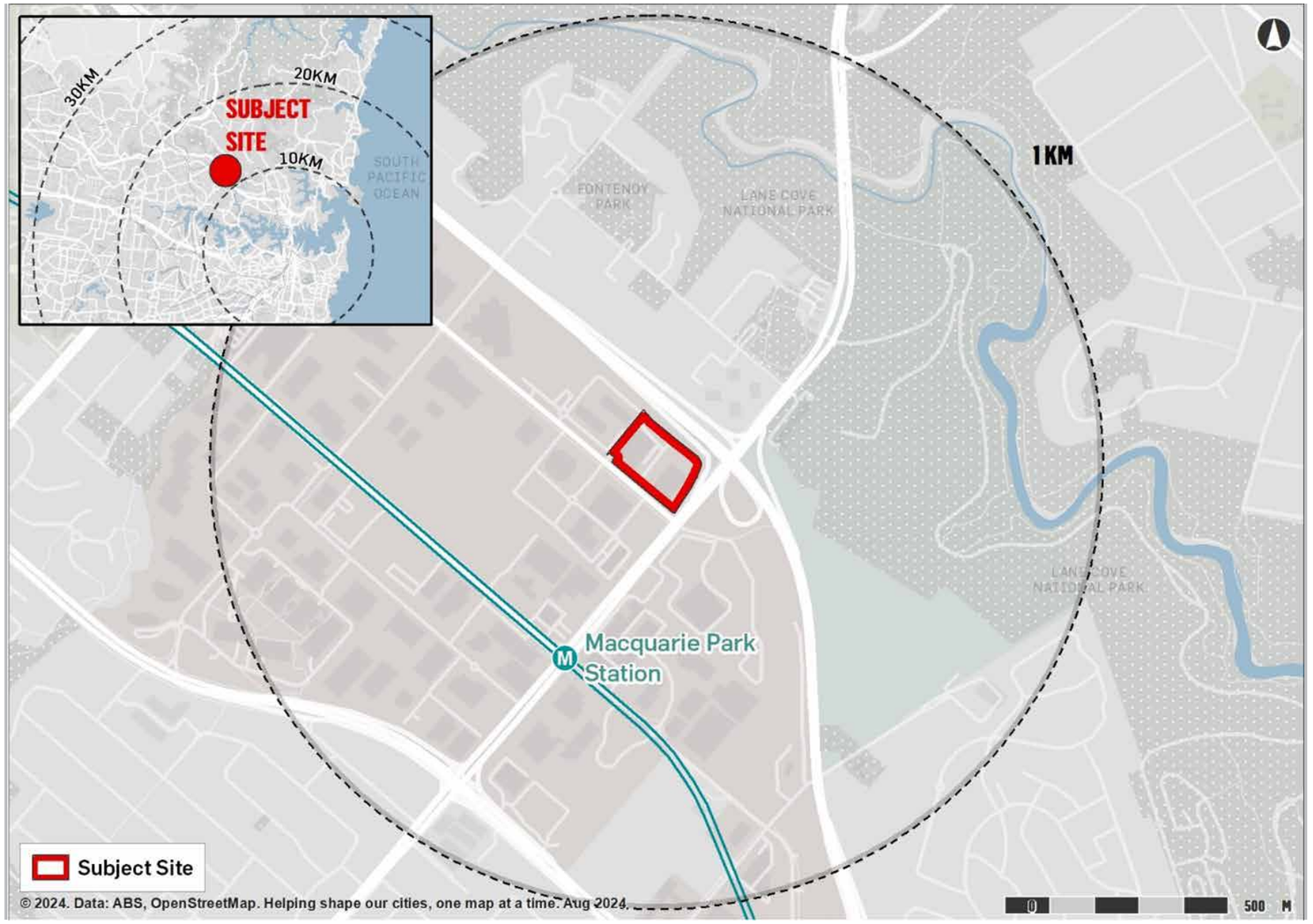


Figure 1 Site location (Urbis).

1.3 PROPOSED DEVELOPMENT

A State Significant Development Application (SSDA) has been prepared in support of a data centre at 4-10 Talavera Road, Macquarie Park. The site comprises four individual allotments totalling approximately 25,211m² in area, is zoned E3 Productivity Support.

The proposal will include:

- Site preparation works including demolition, bulk excavation and removal of existing structures on the site, tree and vegetation clearing and bulk earthworks
- Construction, fit out and operation of five-storey, 135MVA data centre tower with a maximum building height of 45m and total gross floor area of 29,668m² comprising:
  - 60 at-grade parking spaces
  - Two (2) loading dock spaces
  - Four (4) levels of technical data hall floor space with two (2) data halls per floor
  - Ancillary office space and amenities on Lower Ground Level
  - Offices and amenities located from Mezzanine Level to Level 5
- Provision of required utilities including:
  - Eleven (11) in-ground diesel storage tanks
  - Five (5) above-ground water tanks
  - Three (3) 33kV switch-rooms on site
- Vehicle and pedestrian access provided via Talavera Road
- Associated landscaping and site servicing
- Installation of site services and drainage infrastructure
- A floor space ratio of approximately 1.18:1.

Figure 2 Site plan (HDR).

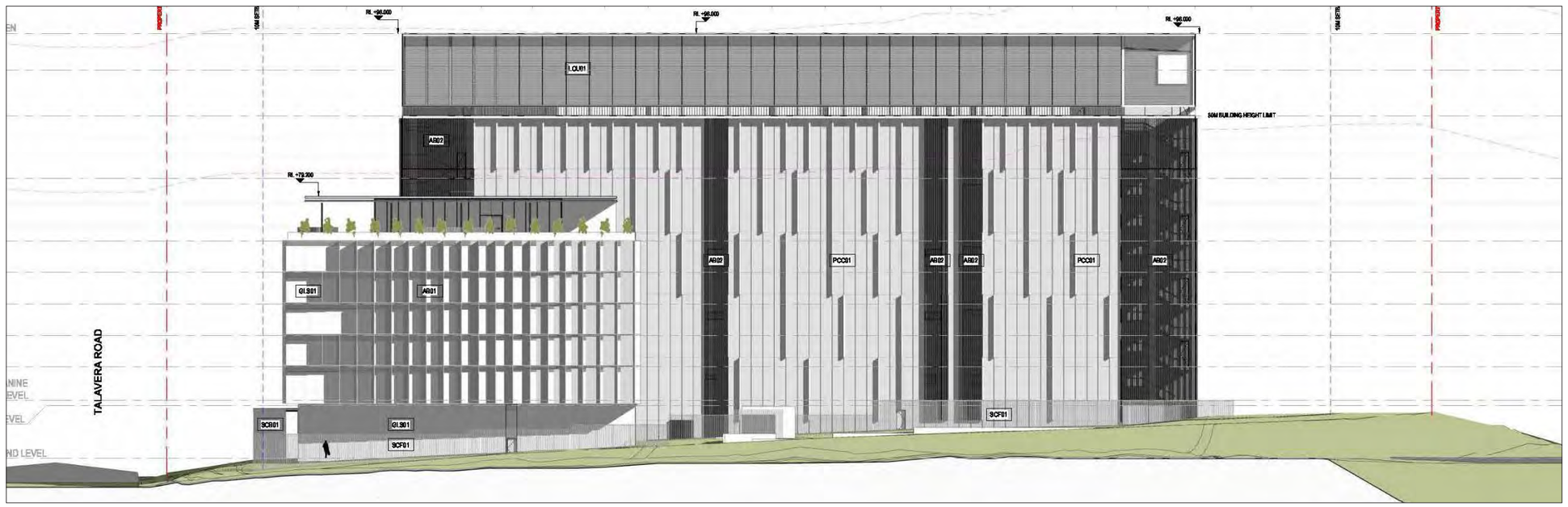


Figure 4 East elevation (HDR).

Figure 3 South elevation (HDR September 2024).

02 VIA METHODOLOGY

2.1 URBIS METHODOLOGY

The methodology employed by Urbis to assess visual impacts is based on a combination of established methods used in NSW. It is based on widely adopted concepts and terminology included in multiple Visual Impact Assessment (VIA) methods, guidelines and objectives.

In addition the Urbis VIA method draws on 30 years of academic research and publications by industry leaders who have considered a more tailored response to assess the visual impacts of built forms in urban settings rather than Landscape Character Visual Impacts Assessments (LCVIA).

An LCVIA takes a more holistic approach to changes proposed to the physical and visual landscape, which in our opinion is more appropriate to assess the impacts of development in greenfield locations or sites that are predominantly characterised by rural or open, less developed landscapes.

Reviewing and combining industry best practice, Urbis continually refines its VIA methodology so that it is appropriate for application across an urban visual context. The Urbis methodology identifies objective 'visual baseline' information about the site and surrounds, analyses the extent of visual effects or quantum of change using visual aids from key locations, and considers the importance of that change. The significance of the extent of visual effects is explained and determined in the visual impact assessment section of the method and this report.

The Urbis method takes into consideration other relevant factors such as the underlying strategic planning intent of the site, its immediate or wider setting. For example other methods do not consider visual compatibility with the existing or desired future character for the site or area which may allow for transformational visual change.

The Urbis method also distinguishes and places 'weight' on key factors such as view place and viewer sensitivity, physical absorption capacity etc. and considers impacts on unique settings near the site that could be potentially affected, including for example heritage items, conservation areas, views to icons and areas of high scenic quality.

Separating objective facts from subjective opinion provides a robust and comprehensive matrix for analysis and final assessment of visual impacts.

The sequence of steps and logic flow is shown graphically in the method flow chart.

Our method also has regard to:

The Landscape Institute Technical Guideline Note- Visual Representation of Development Proposals (AILA 2019)

Guidance note for Landscape and Visual Assessment (AILA 2018)

Guidelines for Landscape Character and Visual Impact assessment, Environmental Impact Assessment practice note EIA -NO4 prepared by the Roads and Maritime Services 2018 (RMS LCIA)

Urbis rely on accurately prepared and certifiable photomontages prepared by ourselves or others to satisfy the NSW Land and Environment Court photomontage policy.

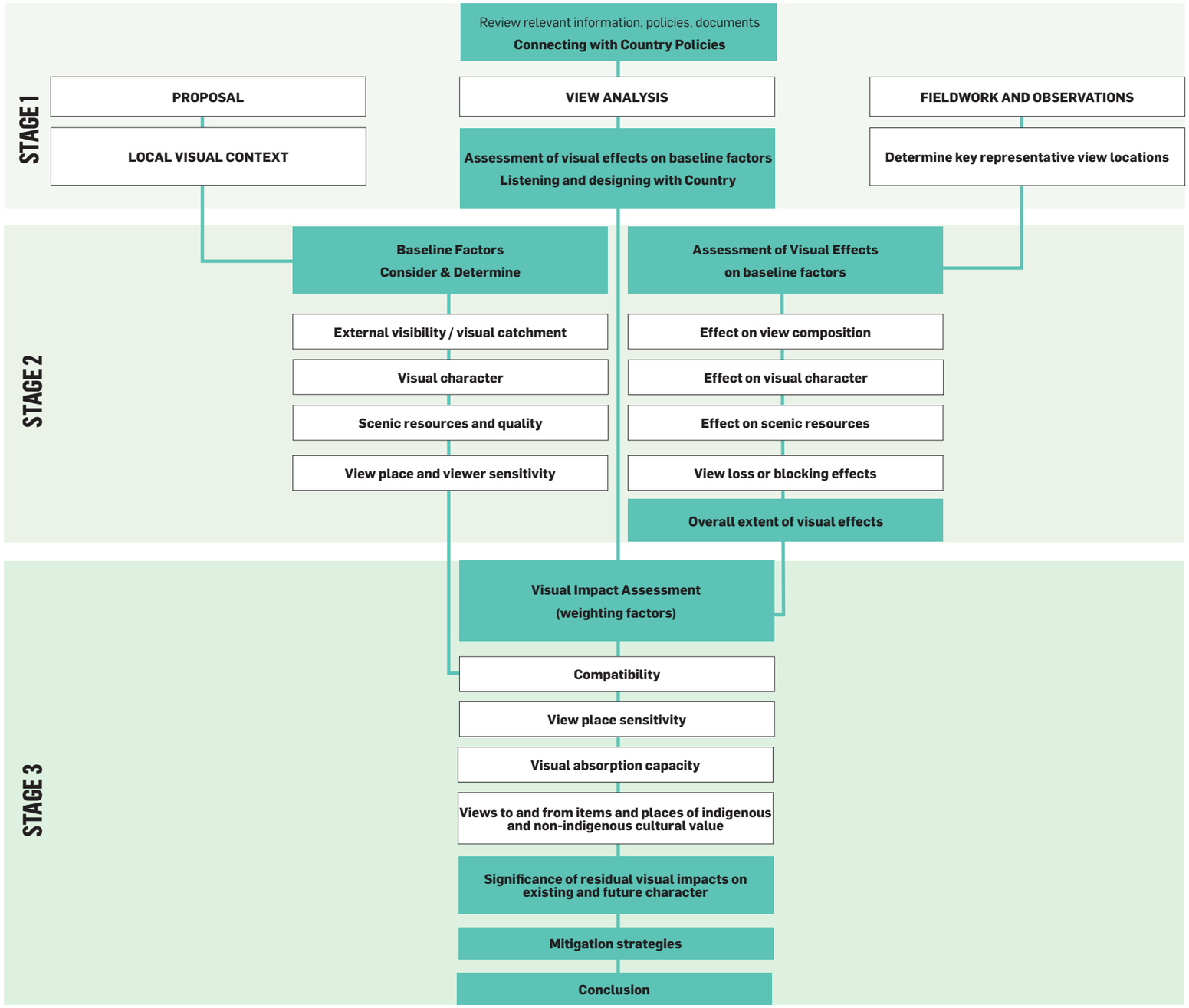


Figure 5 Methodology flowchart.

2.2 VISUAL CONTEXT

The site is located within the Macquarie Park Corridor, a significant economic and employment precinct in Sydney's North District and within the E3 Productivity Support zone under the *Ryde Local Environmental Plan 2014.*

SOUTH

The site's visual context to the south is characterised by industrial and commercial built form adjacent to Talavera Road that range from three to five stories with large floor plates. The built form is spatially well separated from one another to allow for vehicle and pedestrian access to within the business parks or for on-site parking which allows for views to within the business parks. The built form is set back from Talavera Road and has landscaped areas fronting the road with a mixture of mature tree species filtering views of the built form.

WEST

Immediately west of the site is further business park built form which is visually comparable to developments immediately south of the site including spatial separation between buildings and setbacks from Talavera Road with intervening planting filtering views. Beyond this at 197-223 Herring Road is the Macquarie Centre which is visually distinct from surrounding development due to its scale (approximately 11 hectares of development) which presents to surrounding Talavera Road, Herring Road and Waterloo Road as a consistent built form of varied architectural components. Due to the surrounding road topography and varied building heights within the centre, the built form presents to surrounding road at varied heights ranging from approximately 2 - 7 stories. Further west beyond Macquarie Centre is Macquarie University campus which covers approximately 100 hectares and is comprised of a variety built forms ranging in height and bulk, with built form fronting surrounding roads generally set back to allow for landscaped frontages of mature trees which filter views of buildings and views to within the campus.

NORTH

Bordering the north of the site is the six lane M2 Motorway which is set below the site by approximately 8-10m with an intervening vegetated embankment. The M2 provides a significant separation between the site and landscape elements further to the north by a varied width ranging from approximately 70-100 metres. Between the M2 and Lane Cove National Park is a band of high density residential development with residential flat buildings (RFBs) ranging in scale from 2-8 stories that are typically set back from the road with significant levels of mature trees filtering views of built form. The most prominent built forms within this area are the four apartment tower developments at 1-5 Fontenoy Road which are 8 stories.

EAST

The east of the site is bordered by Lane Cove Road, a major suburban arterial road and is the main road from central Sydney to the Macquarie Park commercial area. Further east of Lane Cove Road is a mixture of land uses including a resource recovery centre which is largely obstructed from view from surrounding streets as a result of mature boundary planting, although fleeting views of material stockpiles are possible. South of the resource recovery centre is the Macquarie Park Cemetery and Crematorium which covers approximately 58ha of undulating land.

Figure 6 SURROUNDING VISUAL CONTEXT VIEWPOINT LOCATIONS

Figure 7 View A - Tuckwell Park.

Figure 8 View C - High density residential development north of the site.

Figure 9 View B - M2 Motorway.

Figure 10 View D - Lane Cove Road.

2.3 DOCUMENTED VIEWS

There are no documented views within, or to the site that would be affected by the proposal.

2.4 HERITAGE ITEMS

There are no heritage items within, or within the immediate vicinity of the site. The nearest heritage item is the local heritage item Macquarie Park Cemetery and Crematorium approximately 600m south-east of the site.

2.5 VISUAL CATCHMENT

In simple terms, the key purpose of a VIA is to determine the quantum of visual change (ie level of visual effects), external visibility, that is the extent of change that will be visible from external public domain locations, and also to consider the importance or sensitivity of the view place (including its accessibility).

The range of views assessed should include close, medium and distant views so that a representative sample of the types of views that are likely to be experienced by the public are considered. In this way conclusions about visual impacts across the wider, 'theoretical' potential visual catchment can be considered.

Visibility is also considered in terms of its likely exposure period for example; the kind of viewing locations, private domain, public domain, parks and reserves and whether potential views will be available for a sustained period of time. For example from moving viewing situations eg from transport/rail/road corridors. Urbis have considered these factors as part of our desktop review and prior to undertaking or fieldwork.

Prior to undertaking fieldwork, Urbis staff undertook a desktop review of all relevant statutory and non-statutory documents, an analysis of aerial imagery and topography including Google Earth and LiDAR data to establish the potential visual catchment and to inform fieldwork inspections. Following fieldwork, Urbis selected and recommended view places for further analysis via the use of objective visual aids.

Desktop analysis and on site fieldwork found that:

- The visual catchment of the site is predominantly restricted to close views from the south, east and north-east, and intervening built form from within the surrounding business park developments limits views towards the site.
- The proposal is most visible in close views from the immediately surrounding streets, particularly Talavera Road and Lane Cove Road bordering the southern and eastern edges of the site.
- Residential views towards the subject site are limited by intervening built form and vegetation, or are oblique views which are not orientated directly towards the subject site.
- Potential view loss in relation to private domain views is unlikely to be significant as a result of built form, vegetation and distance (such as from the high density residential to the north of the site and low density residential beyond Lane Cove National Park).

03 BASELINE VISUAL ANALYSIS

3.2 VISUAL CHARACTER OF THE SITE

The land to which this SSDA relates is recognised as 4 & 6-10 Talavera Road, Macquarie Park, within the City of Ryde local government area (LGA). The site occupies multiple land allotments and is legally described as follows:

- Lot 11 in DP733881 (4 Talavera Road)
- Lot 4 in DP1031467 (6 Talavera Road)
- Lot 10 in DP883750 (6A Talavera Road)
- Lot 11 in DP883750 (6A Talavera Road)

The site is located within the Macquarie Park Corridor, a significant economic and employment precinct in Sydney's North District contributing to national and global economic development.

The site is bound by Talavera Road (primary frontage Figure 11), Lane Cove Road to the east (secondary frontage), the Talavera Corporate Centre to the west and the M2 Motorway to the north. The site has a primary frontage to Talavera Road of approximately 200 metres and a maximum overall depth of approximately 150 metres.

The site is occupied by to two buildings which are orientated on an approximate north to south alignment with frontages to Talavera Road of between 50-53 metres. The building at 6 Talavera Road has a southern third which is 5 stories in height, with the remaining two thirds of the building being an attached low level warehouse which is generally obstructed from view from the road.

4 Talavera Road (the Getinge building - Figure 12) on the south-east corner of the site presents as the smallest building frontage to Talavera Road and Lane Cove Road at three stories, with an attached warehouse component to the north-west which has limited visibility from Talavera Road.

There is a high level of vegetation around the perimeter of the site, particularly to the north-west corner, as well as internal tree planting throughout the internal hardstand and car parking areas.

3.3 SCENIC QUALITY

Scenic quality relates to the likely expectations of viewers regarding scenic beauty, attractiveness, or preference. Scenic preferences typically relates to the variety of features that are present, and the uniqueness or combination of those features. Scenic quality of the visual setting of the subject site is a 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 and internationally.

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 is occupied by nondescript low-height contemporary development that lacks any distinguishing or unique features.

The surrounding context to the south is comprised of commercial and distribution development built-form characterised by large, bulky buildings with square and rectangular floorplates separated from one another with sections of hardstand and is highly urbanised.

There are no heritage items within the site or immediately adjacent to it.

The nearest significant public open spaces are north of the site and include Lane Cove National Park, however this distinctly separated from the site by the M2 Motorway.

As such, the scenic quality of the site and immediate surrounding context is low.

3.4 VIEW PLACE SENSITIVITY

This factor relates to the likely level of public interest in a view of the proposed development. The level of public interest includes assumptions made about its exposure in terms of distance and number of potential viewers. For example, close and middle-distance views from public places such as surrounding roads and intersections that are subject to large numbers of viewers, would be considered as being sensitive view places. However, the level of sensitivity depends on the nature of the view and whether it is gained from either a moving viewing situation and the duration of exposure to the view for example for short periods of time or for sustained periods.

Public domain views are viewed primarily by users of the surrounding road network, primarily Talavera Road and Lane Cove Road with views typically being for a short period of time from moving situations.

The existing surrounding visual landscape includes a number of large commercial and distribution developments and significant transport corridors and infrastructure, including the M2 Motorway to the north.

The view place sensitivity is rated as low.

3.5 VIEWER SENSITIVITY

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 the overall rating of the sensitivity to visual effects.

Likely potential views from residential dwellings are restricted to the Macquarie Gardens residential flat building development north of the site approximately 110m and separated by the M2 Motorway where the site and proposal would be seen in a wide visual composition amongst existing commercial and distribution built-form development.

Figure 11 Talavera Road.

Figure 12 Existing commercial development on site.

3.6 35 WATERLOO ROAD

A proposed Build to Rent (BTR) development at 35 Waterloo Road, Macquarie Park is currently in the Response to Submissions phase. The proposal involves the demolition and construction of a new BTR development consisting of 46,314m² of GFA encompassing 513 units across 4 buildings (Buildings a, B, c & D) ranging between 7-20 storeys, with retail, community uses and recreation areas at ground floor level and basement parking.

Based on desktop analysis, review of submitted architectural plans and architectural design report for 35 Waterloo Road, and fieldwork undertaken the following comments are made about potential visual impacts:

- The proposal is approximately 220m north-east from the proposed BTR development.
- Buildings A & D have potential direct facing views towards the proposal from dwellings on the building northern elevations.
- Buildings B & C have potential angled views towards the proposal.
- Potential views for all buildings are from living rooms, bedrooms and terraces.
- For all buildings, Level 12 (RL+97) is higher than the maximum height of the proposal (RL+96).
- As a result, Level 12 and above would potentially be able to perceive the proposal, but would be able to see over the proposal northwards including to Lane Cove National Park (refer Figure 14).
- Of all proposed BTR buildings, Building D has the potential for the most dwellings to have views towards the proposal.
- Courtyard by Marriot is an 8 storey hotel to the north of the site which would block up to Level 7 of a section of Building D based on architectural elevations and the difference in ground level (refer Figure 14).
- Buildings within the proposed BTR scheme block sections of views towards the proposal from one another, eg Building D blocks large sections of Building A, B & C south of it, Building C blocks a section of Building A etc (refer Figure 14).
- Due to this, only sections of elevations of buildings A, B, C & D with potential views to the proposal site retain possible views (shown in blue in Figure 14).
- These views would likely include existing development and tree canopy between Dirrabari Road and Talavera Road, none of which are local or stage heritage items, or unique scenic features.
- Views to be potentially affected do not include iconic views or views of icons (eg the Sydney Opera House, Sydney Harbour Bridge etc).
- Immediately north of the proposal is the M2 Motorway, R4 zoned land including tower forms within Macquarie Gardens and Tuckwell Park. Sections of these may be blocked from view by the proposal.
- Due to the spatial separation between the proposed BTR scheme and the proposal, the proposed data centre would be viewed in a medium wide visual composition allowing for views of existing compositions and elements to remain visible.
- When all dwellings within the proposed BTR scheme are considered (not just the impacted dwellings), the majority of dwellings would be unlikely to have views towards the proposal and would be unaffected.

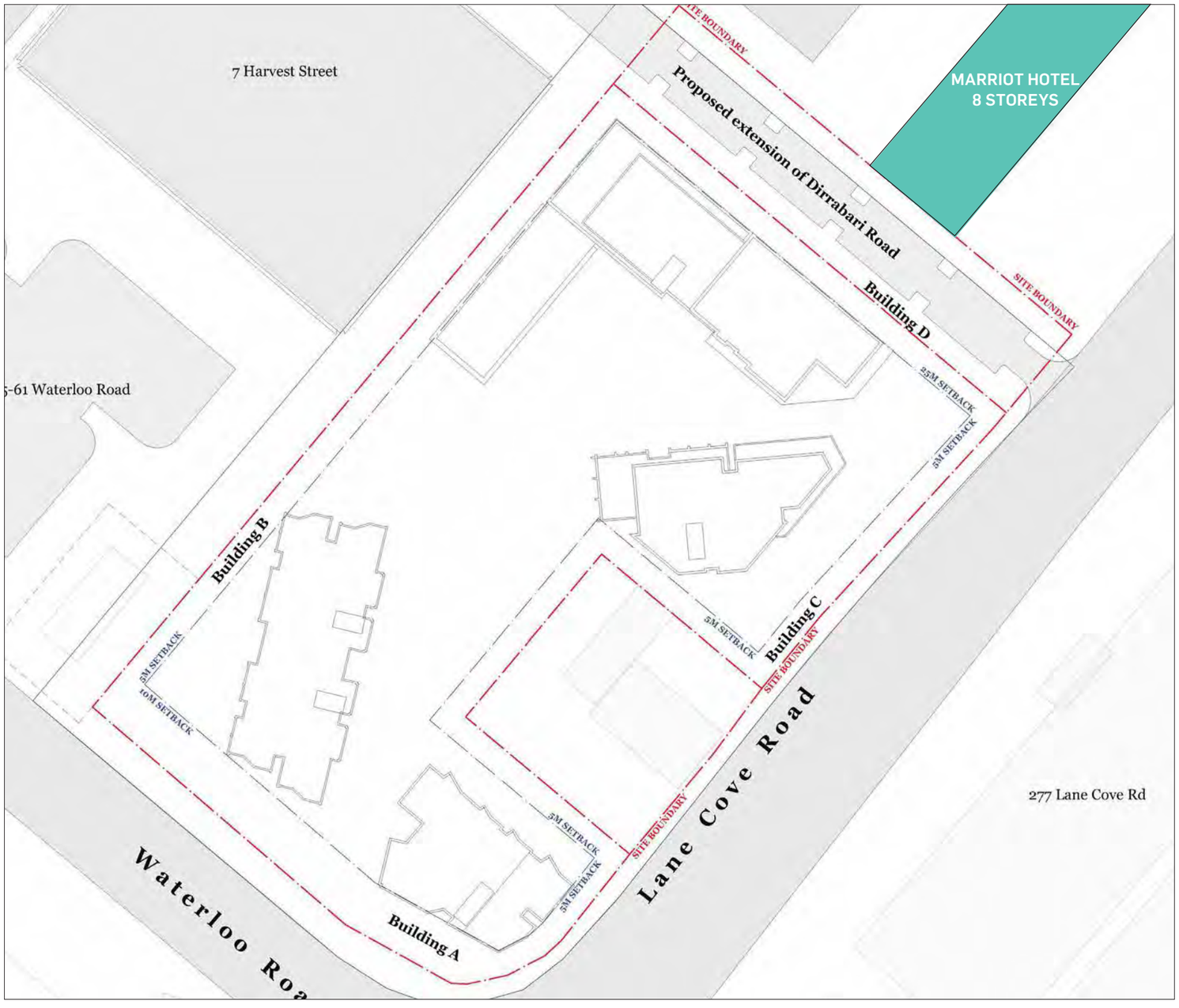
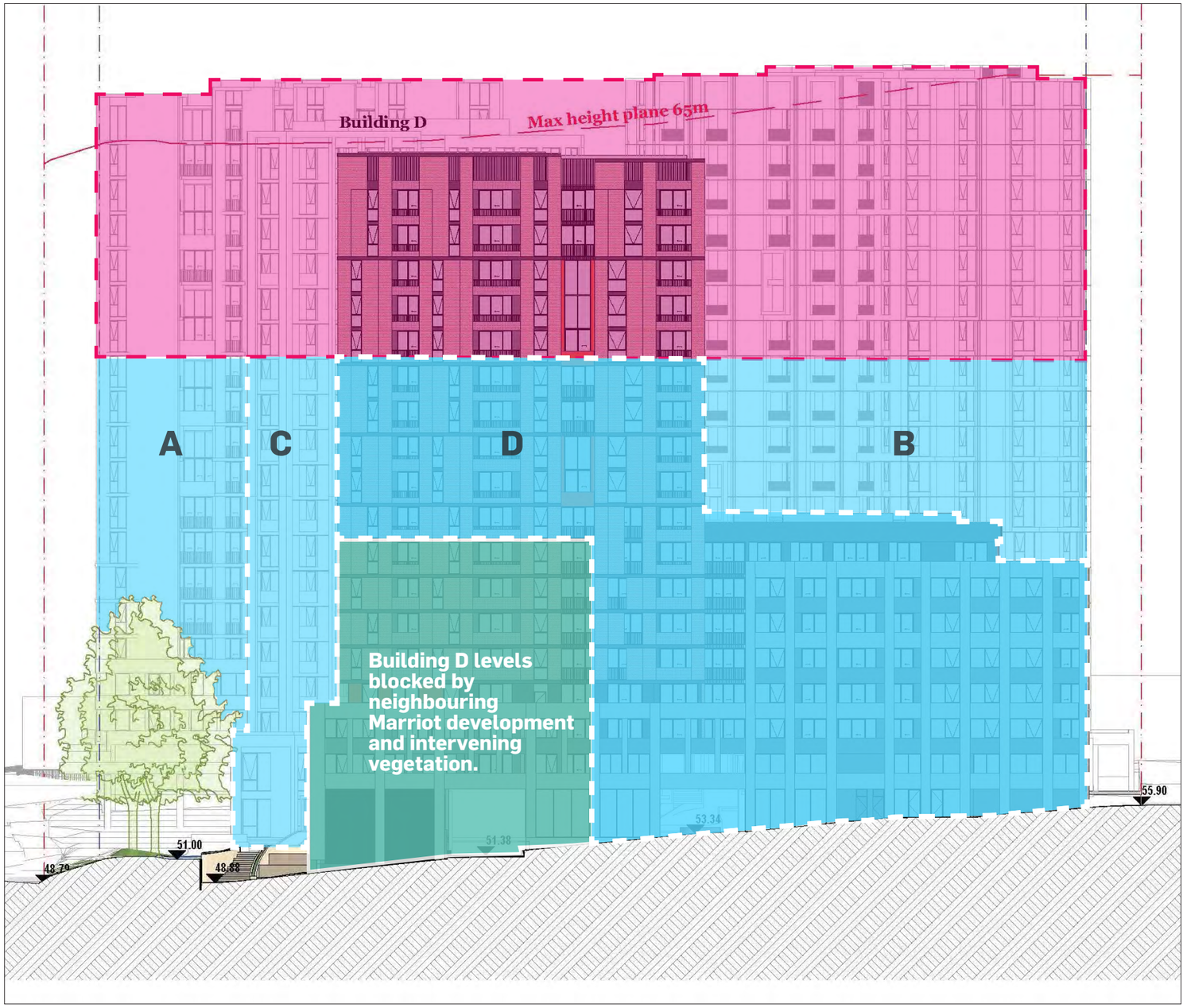


Figure 13 Existing commercial development on site.



LEGEND

- Dwellings above the maximum height of the proposal.
- Dwellings with potential views towards the proposal.
- Dwellings blocked by existing neightbouring development.

Figure 14 Northern elevations of Buildings A, B, C & D with potential visibility to the proposal.

04 VISUAL EFFECTS ANALYSIS

4.1 USE OF PHOTOMONTAGES

Prior to undertaking fieldwork, Urbis undertook a desktop review of all relevant statutory and non-statutory documents, an analysis of aerial imagery and topography and lidar data to establish the potential visual catchment to inform fieldwork inspections. Following fieldwork Urbis selected and recommended 5 public view locations for further analysis.

View No.	VIEWPOINT LOCATION
View 01	View south-west from Tuckwell Park entrance
View 02	View south-east from 11 Khartoum Road
View 03	Lane Cove Bridge over M2 looking south-west
View 04	View north from Lane Cove Rd
View 05	Macquarie Gardens - West Tower approx. Level 7

4.2 CERTIFICATION OF PHOTOMONTAGES

The method of preparation is outlined in Appendix 3 of this report.

The accuracy of the locations of the 3D model (prepared by the project architects) of the proposed development inserted into digital photographs has been 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 Urbis and were considered to be within reasonable limits.

Urbis is satisfied that the photomontages have been prepared in accordance with the Land and Environment Court of New South Wales photomontage policy.

Urbis certifies, 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.

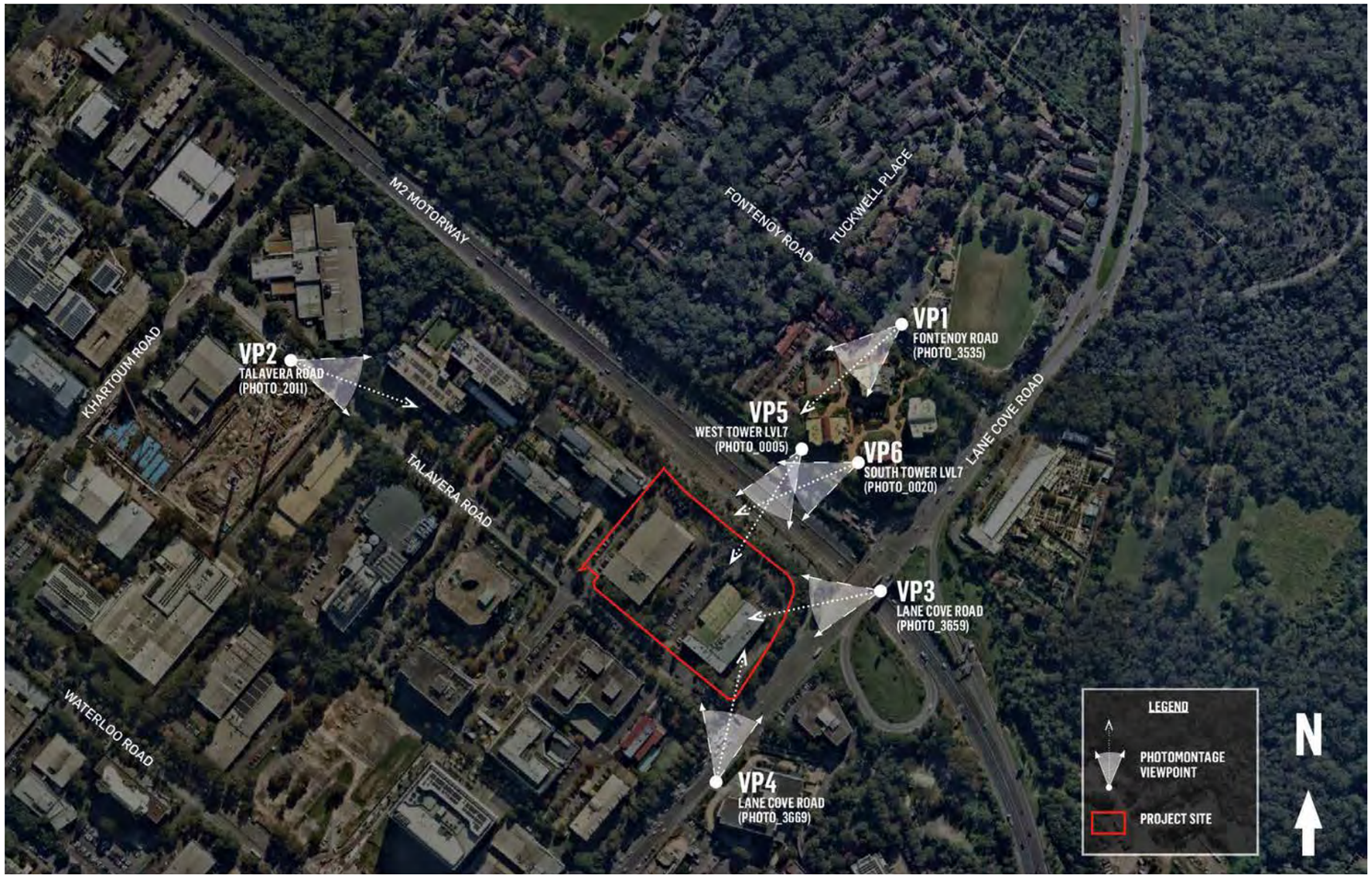


Figure 15 Viewpoint location map.

VIEW 01
VIEW SOUTH-WEST FROM TUCKWELL PARK ENTRANCE

DISTANCE CLASS

- Medium
- 280m

EXISTING COMPOSITION OF THE VIEW

This is a southwest view to site from a residential street north of the M2 Motorway, from the entrance to Tuckwell Park. The view is characterised by the sidewalk and entry of 1-15 Fontenoy Rd. In the foreground part of the road carriageway can be seen as well as various vegetation types within the property with one prominent mature tree central to the view composition, and several medium height trees which obstruct a small amount of built form on site. The mid levels of the eight storey apartments can be seen in the background left. At the mid right of the composition, the industrial and commercial buildings across the M2 can be seen in the distance to the site. The proposal site is only partially visible due to build form and vegetation in the foreground which creates a moderate view corridor towards the site where a small portion of existing built form is visible .

VISUAL EFFECTS OF THE PROPOSED DEVELOPMENT ON THE COMPOSITION AS MODELLED

The foreground and mid-ground composition is unaffected by the proposal.
The proposed built form will be almost entirely blocked from view due to the intervening residential flat building and vegetation, however a small portion of the data centre will be visible protruding above vegetation within the motorway reserve embankment and the apartment complex within the centre of the view.

The new built form blocks a section of open sky as south of the proposal and does not block views to any heritage items or areas of unique scenic quality.

Visual effects of proposed development (quantum of change)	
Visual Character	low
Scenic Quality	low
View Composition	low
Viewing Period	low
Viewing Distance	medium
View Blocking of Scenic Elements	low
Overall rating of effects on baseline factors	**low**

Weighting Factors	
Public Domain View Place Sensitivity	high (up-weight)
Physical Absorption Capacity	high (down-weight)

See section 5.8 for overall Visual Impact Rating.

Figure 16 Viewpoint 01 location.

Figure 17 Viewpoint 01 existing view.

Figure 18 Viewpoint 01 photomontage.

VIEW 02

VIEW SOUTH-EAST FROM 11 KHARTOUM ROAD

DISTANCE CLASS

- Medium
- 350m

EXISTING COMPOSITION OF THE VIEW

This view composition is characterised by the roadway of Talavera Rd running parallel to southern boundary of the site. The foreground and mid-ground is comprised of the grassed frontage and vegetation that bounds the site and recedes south-east towards Lane Cove Road. Mature vegetation along the site boundary highly filters views of existing built form on site and visually creates a consistent green edge adjacent to the road.

VISUAL EFFECTS OF THE PROPOSED DEVELOPMENT ON THE COMPOSITION AS MODELLED

The foreground and mid-ground composition is unaffected by the proposal.

Intervening vegetation almost entirely blocks the proposed built form and maintains the green edge adjacent to the road. A small section of the data centre is visible above tree canopy, but is a minor addition to the view composition.

The visible proposed built form does not obstruct views to highly valued scenic features or visual resources.

Visual effects of proposed development (quantum of change)	
Visual Character	medium
Scenic Quality	low
View Composition	low
Viewing Period	low
Viewing Distance	medium
View Blocking of Scenic Elements	low
Overall rating of effects on baseline factors	**low**

Weighting Factors	
Public Domain View Place Sensitivity	low (down-weight)
Physical Absorption Capacity	high (down-weight)
Compatibility with Urban Context and Visual Character	high (down-weight)

See section 5.8 for overall Visual Impact Rating.

Figure 19 Viewpoint 02 location.

Figure 20 Viewpoint 02 existing view.

Figure 21 Viewpoint 02 photomontage.

VIEW 03

LANE COVE ROAD BRIDGE OVER M2 LOOKING SOUTH-WEST

DISTANCE CLASS

- Close
- 90m

EXISTING COMPOSITION OF THE VIEW

This view composition is primarily comprised of the multiple lane carriageway of Lane Cove Rd and connecting M2 on ramp. The site is located in the mid-ground of the image but is largely obscured by dense mature vegetation to the site boundary and motorway reserve. A consistent green edge of mature vegetation is visible receding southwards adjacent to Lane Cove Road.

VISUAL EFFECTS OF THE PROPOSED DEVELOPMENT ON THE COMPOSITION AS MODELLED

The foreground composition is unaffected by the proposal.

The proposal introduces, new contemporary built-form to the mid-ground composition. The mid and upper sections of the northern and eastern elevations of the data centre are visible above intervening vegetation adjacent to Lane Cove Road and within the M2 Motorway reserve. The proposed planting filters views of the lower sections of the proposed buildings.

The proposal increases the level and perception built-from along Lane Cove Road.

The new built form blocks views to open sky as south of the proposal and does not block views to any heritage items or areas of unique scenic quality.

Visual effects of proposed development (quantum of change)	
Visual Character	medium-high
Scenic Quality	low
View Composition	medium-high
Viewing Period	low
Viewing Distance	medium
View Blocking of Scenic Elements	low
Overall rating of effects on baseline factors	**medium**

Weighting Factors	
Public Domain View Place Sensitivity	low (down-weight)
Physical Absorption Capacity	medium (neutral)
Compatibility with Urban Context and Visual Character	high (down-weight)

See section 5.8 for overall Visual Impact Rating.

Figure 22 Viewpoint 03 location.

Figure 23 Viewpoint 03 existing view.

Figure 24 Viewpoint 03 photomontage.

VIEW 04

VIEW NORTH FROM LANE COVE ROAD

DISTANCE CLASS

- Close
- 70m

EXISTING COMPOSITION OF THE VIEW

This view is characterised by the streetscape and road carriageway of Lane Cove Rd. Running from left to right across the foreground of the view, a gradual fall can be seen in the road with the site sitting past the intersection of Talavera and Lane Cove Rd. In the centre left of the mid-ground, the existing building on site can be seen as a three storey commercial building. It is partially screened behind the mature vegetation that runes adjacent to Lane Cove Rd.

VISUAL EFFECTS OF THE PROPOSED DEVELOPMENT ON THE COMPOSITION AS MODELLED

The foreground composition is unaffected by the proposal.

The proposal introduces new, contemporary built-from to the mid-ground composition, with the mid and lower sections of the eastern and southern elevations filtered by intervening vegetation.

The new built form increases the level of built form visible when travelling along Lane Cove Road, however these views would typically be oblique views for brief periods of time.

The new built form blocks views to open sky north of the proposal and does not block views to any heritage items or areas of unique scenic quality.

Visual effects of proposed development (quantum of change)	
Visual Character	medium
Scenic Quality	low
View Composition	medium
Viewing Period	low
Viewing Distance	high
View Blocking of Scenic Elements	low
Overall rating of effects on baseline factors	**low-medium**

Weighting Factors	
Public Domain View Place Sensitivity	low (down-weight)
Physical Absorption Capacity	medium (neutral)
Compatibility with Urban Context and Visual Character	high (down-weight)

See section 5.8 for overall Visual Impact Rating.

Figure 25 Viewpoint 04 location.

Figure 26 Viewpoint 04 existing view.

Figure 27 Viewpoint 04 photomontage.

5.2 REPRESENTATIVE PRIVATE VIEW

Macquarie Gardens includes four low-rise residential towers that are widely spaced around a large central courtyard. The towers appear to be in pairs based on similarly shaped floorplates where all are approximately 8 residential storeys and share a simple 'butterfly' arrangement characterised by 'wings' either side of a central services section. Roof forms and elevations define the west and east towers as a pair and the north and south towers as a pair. The west elevations of the north, west and south towers present towards parts of the site.

In this regard Urbis supervised drone photography from locations adjacent to the top floor balconies of each of the three towers. Drone photos captured a Field of View (FOV) equivalent to 24mm Focal Length (FL) photograph.

Although drone photos provide a useful indication of the likely views available from adjacent dwellings, the composition shown is 'overstated' in that is closer to the site and proposed development and is not constrained by ceilings, walls, doors and other parts of the dwelling. Therefore the extent of visual change demonstrated in the photomontage is a 'worst case scenario' and would not in all likelihood be available to residents from their dwellings. A drone photograph has been used to prepare a photomontage to represent potential private view from an upper level dwelling. This visual aid has informed our assessment of the representative visual effects of the proposal on private views.

ASSESSMENT OF PRIVATE VIEW IMPACTS

Private view impacts or potential view loss is typically assessed using qualitative criteria compared to assessing impacts on public views. Private views are routinely assessed against relevant Land and Environment Court of New South Wales planning principles, the most relevant of which is *Tenacity Consulting v Warringah* [2004] NSWLEC 140, commonly referred to as *Tenacity*. Based on guidance provided by the Court, impacts on private views should be assessed using a series of steps, which are conditional. If the threshold at each step or 'test' is not met, then the principle is not necessarily required to be considered. The need to apply the first step of *Tenacity* is governed by a pre-test threshold question. That is, to determine whether the scenic quality or extent of potential view loss is sufficient to trigger the assessment.

For this project, given the surrounding visual context and likely view compositions anticipated observed by Urbis and confirmed by drone photos, in our opinion a *Tenacity* assessment was not required. As previously stated, the views available from residential units at this development could broadly be described as vernacular, district views which include commercial, industrial and tower development. None of the views recorded by the drone include a combination of features that would define them as being of high scenic quality, the views are devoid of heritage items, icons or any other unique features.

Further, a comprehensive *Tenacity* assessment should be based on an inspection of all areas of a dwelling, to be able to answer various questions including for example; room type and use, access to views in relation to formal boundaries, consideration of all views potentially affected from the whole dwelling including those not affected by a proposed development, the extent of potential 'view blocking or view loss' and importantly, the scenic quality, uniqueness or presence of icons in the compositions which could be lost.

Alternatively Urbis has used a simple comparison of existing views and proposed views to determine the extent of visual change (visual effects) and to identify particular features to be lost. We determined that no scenic features of note would be lost.

5.2.1 VIEW 05 - MACQUARIE GARDENS WEST TOWER - VIEW SOUTH-WEST (APPROX. LEVEL 7)

Existing View

The composition is comprised of the M2 Motorway and the vegetated infrastructure reserve embankment along the northern boundary of the site which partially obstructs the existing built-form on site. The roof of the 3 storey Getinge building is visible to the left of the view and the upper storeys of 6-10 Talavera Road visible to the right. The upper levels of several commercial and mixed use buildings and scattered tree canopy are visible in the distance.

Proposed View

The proposed development introduces new, contemporary built-form which replaces existing lower buildings and some open space in the mid-ground composition.
The proposed development does not block views to heritage items or features or compositions of high scenic quality. The proposal blocks views to existing built-form and tree canopy south of the site and a section of open sky.

In our opinion the quantum of visual change which would occur subsequent to the approval and construction of the proposal does not create unacceptable view impacts from this residential tower.

Figure 28 Viewpoint 05 existing view.

Figure 29 Viewpoint 05 photomontage.

05 VISUAL IMPACT ASSESSMENT

Having determined the extent of the visual change based on the 5 representative modelled views (photomontages) Urbis have applied relevant weighting factors to determine the overall level of visual impacts or importance of the visual effects. The factors have been considered in relation to the visual effects to provide up-weight or down-weights and to determine a final impact rating.

The weighting factors include sensitivity, visual absorption capacity and compatibility with urban features.

5.1 SENSITIVITY

The overall rating for view place sensitivity was weighted according to the influence of variable factors such as distance, the location of items of heritage significance or public spaces of high amenity and high user numbers.

There are no heritage items within the site or immediate surrounding context.

There are no significant public open spaces within the immediate vicinity of the site, with the nearest location being Lane Cove National Park north of the site and separated by the M2 Motorway.

Overall view place sensitivity is rated as low.

5.2 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 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.

The existing visual environment has a medium capacity to absorb the visual changes proposed in the modelled views, given that the immediate context includes a significant level of surrounding intervening built-forms which obstructs full visibility of the proposal except from immediately adjacent viewpoints.

5.3 VISUAL COMPATIBILITY

Visual Compatibility is not a measure of whether the proposal can be seen or distinguished from its surroundings. The relevant parameters for visual compatibility are 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.

The surrounding context to the south is comprised of commercial and distribution development built-form characterised by large, bulky buildings with square and rectangular floorplates. North of the site is the M2 Motorway, a large piece of transport infrastructure. As such, the proposal has a high level of visual compatibility with surrounding commercial and infrastructure development and would be unlikely to be viewed as a new, or novel element in the surrounding context.

The proposal has a medium-high level of visual compatibility with the existing Macquarie Park context. The buildings have a comparable floorplate size to the existing buildings in surrounding Lots including the Macquarie Park Commercial Core, however the proposed buildings are typically of a greater height than surrounding buildings which results in an increased perception of bulk and scale. The E3 (Productivity Support) zoning that the proposal is located in includes 'any other development not specified in item 2 or 4' (which does not include data centres) as a permissible land use and as such the visual character and scale of the proposal has been anticipated.

The Macquarie Park Innovation Precinct Strategic Master Plan identifies seven 'neighbourhoods' that are intended to create distinct character areas. The proposal is located within *Ngalawala (Reciprocity) North Park* neighbourhood. Design criteria for this neighbourhood includes:

- Taller buildings are appropriate along Talavera road as well as within the new mixed-use Activity Hub at the intersection of Talavera Road and Khartoum Road to create identity and a hierarchy of place within the neighbourhood.
- The design of taller buildings should allow for a permeable and interesting skyline.

The proposed Data Centre is taller than what is currently on site and surrounding it (current view composition) and as such, visual permeability is maintained. Future development within this area (along Talavera Road) would need to consider staggered building height and spatial separations as to avoid a 'wall' of built-form, however the current visual environment (or proposal) does not result in this.

In our opinion, the proposal is compatible with the desired future character and land uses within Macquarie Park Innovation Precinct Strategic Master Plan.

5.4 VIEWING PERIOD

Viewing period in this assessment refers to the influence of time available to a viewer to experience the view to the site and the visual effects of the proposed development. Longer viewing periods, experienced either from fixed or moving viewing places such as dwellings, roads or waterways, provide for greater potential for the viewer to perceive the visual effects.

Visual effects of the proposal with regard to viewing periods from the public domain are low, typically from moving viewing situations (both pedestrian and vehicle) and experienced for short periods from surrounding roads.

5.5 VIEWING DISTANCE

Viewing distance can influence on the perception of the visual effects of the proposal which is caused by the distance between the viewer and the development proposed. It is assumed that the viewing distance is inversely proportional to the perception of visual effects: the greater the potential viewing distance, experienced either from fixed or moving viewing places, the lower the potential for a viewer to perceive and respond to the visual effects of the proposal.

Locations where the large sections of the proposal can be seen and identified as a new, or novel addition to the existing visual composition are limited to close and medium viewing locations. Intervening elements decrease its visibility and limits long distance view locations.

5.6 SIGNIFICANCE OF RESIDUAL VISUAL IMPACTS

The final question to be answered after the mitigation factors are assessed, is whether there are any residual visual impacts and whether they are acceptable in the circumstances. These residual impacts are predominantly related to the extent of permanent visual change to the immediate setting.

In terms of the urban component of the development, residual impacts relate to individuals' preferences for the nature and extent of change which cannot be mitigated by means such as colours, materials and the articulation of building surfaces.

The residual impacts are low and acceptable given the highly urbanised location of the site where larger scale, contemporary built form is likely to be anticipated by viewers. The development is compatible with its surrounding visual context and the desired future character of the area.

5.7 APPLYING THE 'WEIGHTING' FACTORS

To arrive at a final level of significance of visual impact, the weighting factors are applied to the overall level of visual effects.

Table 3 - Summary of Visual Effects and Weighting Factors.

Visual Effect Rating	VP1	VP2	VP3	VP4
Visual Character	low	medium	medium-high	medium
Scenic Quality	low	low	low	low
View Composition	low	low	medium-high	medium
Viewing Period	low	low	low	low

Viewing Distance	medium	medium	medium	high
View Blocking of Scenic Elements	low	low	low	low
Overall effect rating	**low**	**low**	**medium**	**low-medium**
Weighting Factors	**VP1**	**VP2**	**VP3**	**VP4**
Public Domain View Place Sensitivity	high	low	low	low
PAC	high	high	medium	medium
Compatibility with Urban & Visual Context	high	high	high	high

5.8 OVERALL VISUAL IMPACTS

The overall visual impact rating for each assessed view location after assessing the visual effects (quantum of change) in Section 4.0 and the weighing factors, the overall visual impact ratings are:

VP1 - Low

VP2 - Low

VP3 - Medium-low

VP4 - Low

Taking into consideration the existing visual context and baseline factors against which to measure change, the level of visual effects of the proposed development and in the context of additional weighting factors, the visual impacts of the proposed development were found to be acceptable.

5.9 CUMULATIVE VISUAL IMPACT

Urbis Planning have identified new and potential future development surrounding the proposal.

Table 4 - Summary of Approved and Potential Development

DA Reference	Development Description	Current Status
1-5 Khartoum Road SSD-63235720	Construction and operation of a 5-storey data centre with a building height of 45m and a capacity of 35MW, diesel storage, part road construction, landscaping, car parking and associated infrastructure.	Prepare EIS
1-5 Khartoum Road SSD-59568708	Demolition of existing buildings at the west of the site and construction of a new BTR development comprising 44,700m² GFA with 485 units across 3 buildings, basement car parking, construction for Road 23 and Torrens title subdivision.	Prepare EIS
11-17 Khartoum Road SSD-10467	Construction and operation of a data centre comprising: five-storey data storage building with ancillary office space, supporting infrastructure, services and landscaping.	Approved
11-17 Khartoum Road LDA2020/0229	Amending Concept DA to LDA2017/0547 for M_Park masterplan for three commercial building envelopes and one data centre building envelope. Total GFA of 55,129m² approved across the site with a maximum height of 45m. There are multiple detailed DAs and modifications associated with this Amending DA. These have not been referenced in this table.	Approved
17-23 Talavera Road SSD-24299707 Modification 1	Modification to approved data centre. The modification proposes internal and external alterations. The approved SSDA involved the construction and operation of an expansion to an existing data centre campus.	Under Assessment
100-108 Talavera Road LDA2022/0021	Site preparation and tree removal, 5 storey mixed used podium, a 4.5 storey carpark and three residential towers. The above proposal is integrated development under the Environmental Planning and Assessment Act 1979, as the subject site is within 40m of a waterway and within 40m of bushfire prone land. The relevant approval body is Rural Fire Service and Water NSW.	Approved
45-61 Waterloo Road LDA2018/0172	Concept Development Application comprising site layout for commercial buildings (with retail), roads and Catherine Hamlin Park; maximum building envelopes; gross floor area distribution across the site; onsite parking provision and distribution; staging of indicative development; construction of signalised intersection at the southern end of Road 14 and Waterloo Road; partial construction of Road 1.	Approved
269 Lane Cove Road SSD-63168959	Staged construction and operation of two seven-storey data centre buildings with an office, retail and innovation hub. Total of 93,870m² GFA and a maximum height of 65m.	Response to Submissions
85-97 Waterloo Road and 2 Banfield Road SSD-52604208	Construction of a build-to-rent development comprising 66,638m² GFA including 736 units and community uses across seven buildings with a maximum height of 20 storeys. Retail, recreation a public park and basement parking will also be provided.	Under Assessment
35 Waterloo Road SSD-52947710	Demolition and construction of a new BTR development consisting of 46,314m² encompassing 513 units across 4 buildings ranging between 7-20 storeys, with retail, community uses and recreation areas at ground floor level and basement parking.	Response to Submissions

Cumulative visual impact assessment means the consideration of the visual effects of other nearby development projects along with the proposal.

Types of Cumulative Visual Impact

'Combined' cumulative visual impacts could occur where two or more developments have been, or will be, constructed within the same area and may be viewed from the same viewpoint concurrently within the same field of view.

'Succession' or indirect cumulative visual impacts could occur where two or more developments have been, or will be, constructed within the same locality, and may be viewed from the same viewpoint but not simultaneously within the same field of view. The viewer would be required to change their view direction to observe both developments.

'Sequential' cumulative visual impacts could occur when the observer has to move to another viewpoint to see different developments (e.g. from a vehicle travelling along a highway or from a network of local roads). The magnitude of sequential effects will be affected by speed of travel and distance between viewpoints.

Approved and potential development on Khartoum Road would likely result in sequential cumulative visual impact from public domain locations due to a lack of elevated viewing locations. The highly urbanised character of Macquarie Park means that close and medium distance combined views of the proposal and potential development along Khartoum Road would likely not be possible due to intervening elements. Potential combined views of development along Khartoum Road and the proposal would likely be possible from elevated private domain locations (eg commercial towers in Macquarie Park) where the viewing location is elevated above intervening elements.

Potential development at 17-23 Talavera Road would likely result in combined cumulative visual impacts from public domain viewing locations due to their proximity to one another. Combined views would occur from close and medium viewing locations along Talavera Road as a result of the road corridor where sections of both developments would be visible. Potential combined views of development along Khartoum Road and the proposal would likely be possible from elevated private domain locations (eg commercial towers in Macquarie Park) where the viewing location is elevated above intervening elements.

Approved development at 100 Talavera Road is approximately 1km north-west of the site and separated by existing built-form development. As such, any cumulative view impacts from close and medium distance viewing locations is unlikely. Potential combined views of 100 Talavera Road and the proposal would likely be possible from elevated private domain locations (eg commercial towers in Macquarie Park) where the viewing location is elevated above intervening elements. Both developments would likely be viewed in a wide visual composition and would not generate a significant cumulative effect.

Approved development at 45-61 Waterloo Road is unlikely to result in combined cumulative visual impacts from close and medium distance public domain viewing locations as a result of the urbanised nature of the location and intervening elements including built-form and vegetation.

Under assessment development at 85-97 Waterloo Road is approximately 540m north-west of the proposal and separated by existing and under construction built form development. Close public domain view locations are unlikely to result in any cumulative visual impacts, however a brief combined impact may be possible from a short section of Lane Cove Road over the M2 Motorway due to a more open expanse where the proposal and the potential residential towers (up to 20 storeys) may be seen in the same visual composition.

Potential development at 35 Waterloo Road (with tower forms up to 20 storeys) would likely result in combined cumulative visual impacts from close and medium distance view locations for both pedestrians and vehicles using Lane Cove Road where both developments would be visible along the road corridor. These views would typically be for brief periods of time.

Potential combined views of development along Waterloo Road and the proposal would likely be possible from elevated private domain locations (eg commercial towers in Macquarie Park) where the viewing location is elevated above intervening elements.

Potential development at 269 Lane Cove Road would likely result in combined cumulative visual impacts from close and medium distance view locations for both pedestrians and vehicles using Lane Cove Road where both developments would be visible along the road corridor. These views would typically be for brief periods of time. Potential combined views of both developments would likely be possible from elevated private domain locations (eg commercial towers in Macquarie Park) where the viewing location is elevated above intervening elements.

Cumulative Visual Impact Summary

- The highly urbanised nature limits opportunities for expansive views where significant cumulative visual impacts would occur from close and medium distance viewing locations.
- Where combined views of the proposal and potential development are likely possible, the views would typically be for brief periods of time from moving situations.

5.10 SUMMARY

- Views from close and medium distance classes have been used to determine visual impacts across the potential visual catchment as a result of the limited visual catchment of the site resulting from intervening built form and vegetation.
- The visual catchment of the site is predominantly restricted to close views from the south, east and north-east.
- Views from the public domain are predominantly limited to transport corridors and as such, visibility is typically from moving situations.
- The proposal is most visible in close views from the immediately surrounding streets, particularly Talavera Road and Lane Cove Road bordering the southern and eastern edges of the site.
- The visual context surrounding the site is characterised by built forms with large floorplates and varied bulk and scale consistent with commercial and distribution uses.
- Residential views towards the subject site are limited by intervening built form and vegetation, or are oblique views which are not orientated directly towards the subject site.
- Indicative potential views from the closest and potentially most affected residential dwellings at Macquarie Gardens were investigated using drone photography and a representative photomontage.
- Visual effects on the visual character and scenic quality of potential residential views from Macquarie Gardens were found to be low and acceptable.
- Views to the site and proposal from private domain dwellings in the wider visual catchment are limited due to intervening built form and vegetation.
- Based on fieldwork observations, potential view loss in relation to private domain views is unlikely to be significant and restricted to one residential development (Macquarie Gardens) north of the site.
- Of the four views analysed, three were rated as a low visual impact and one as medium-low visual impact.
- The built form proposed as modelled in all views, does not generate any significant visual impacts on the view compositions analysed and does not block views of any scenic or highly valued features in the landscape.
- In our opinion, the proposal is visually compatible with the desired future character and land uses within Macquarie Park Innovation Precinct Strategic Master Plan.
- In our opinion the extent of the visual effects generated is acceptable in the immediate and wider visual context as modelled.

06 APPENDIX

APPENDIX 1

ANALYSIS OF VISUAL EFFECTS

Published on the NSW Department of Planning, Industry and Environment website via major projects tab (NSW DPIE). This information has been developed by RLA and is acknowledged as being a comprehensive summary of typical descriptions regarding visual effects. The descriptions below have been used as a guide to make subjective judgements in relation to the effects and impacts of the proposed development on each modelled view.

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 (Glimpses-as explained in viewing period).	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-as explained in viewing period).	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).
Viewer sensitivity	Residences providing distant views (>1000m).	Residences located at medium range from site (100-1000m) with views of the development available from bedrooms and utility areas.	Residences located at close or middle distance (<100m as explained in viewing distance) with views of the development available from living spaces and private open spaces.
View composition	Panoramic views unaffected, overall view composition retained, or existing views restricted in visibility of the proposal by the screening or blocking effect of structures or buildings.	Expansive or restricted views where the restrictions created by new work do not significantly reduce the visibility of the proposal or important features of the existing visual environment.	Feature or focal views significantly and detrimentally changed.
Viewing period	Glimpse (e.g. moving vehicles).	Few minutes to up to half day (e.g. walking along the road, recreation in adjoining open space).	Majority of the day (e.g. 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 1 Description of visual effects.

APPENDIX 2

ANALYSIS OF VISUAL IMPACTS

In order to establish an objective assessment of the extent and significance of the likely visual changes in each view, Urbis have used the following descriptions of visual impacts on baseline factors sourced from Richard Lamb and Associates (RLA).

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 location is 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.

Table 2 Indicative Ratings Table of Visual Impact Factors.

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK, NSW

VISUAL ASSESSMENT | PHOTOMONTAGES

PREPARED FOR
GOODMAN GROUP
NOVEMBER 2024

PHOTOMONTAGES PREPARED BY:

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

DATE PREPARED :

14 November 2024

VISUALISATION ARTIST :

Ashley Poon, Urbis – Lead Visual Technologies Consultant

Bachelor of Planning and Design (Architecture) with over 20 years' experience in 3D visualisation

Manuel Alvelo, Urbis – Design Assistant
Bachelor of Architecture and Master of Urban Planning and Environment

LOCATION PHOTOGRAPHER :

Nick Sisam, Urbis - Senior Consultant, National Design
under direction from Jane Maze-Riley, Urbis - Director, National Design - VPs 1-4

Drone photography taken by third party, under direction from Urbis. - VPs 5 & 6

CAMERA :

Canon EOS 6D Mark II - 26 Megapixel digital SLR camera (Full-frame sensor) - VPs 1-4

DJI Phantom 4 Pro with 24mm equivalent lens - VPs 5 & 6 (for elevated views only)

CAMERA LENS AND TYPE :

Canon EF 24-105mm f/4L IS USM - for VPs 1-4

SOFTWARE USED :

- 3DSMax 2023 with Arnold 5.0 (3D Modelling and Render Engine)
- AutoCAD 2022 (2D CAD Editing)
- Globalmapper 23 (GIS Data Mapping / Processing)
- Photoshop CC 2022 (Photo Editing)

DATA SOURCES :

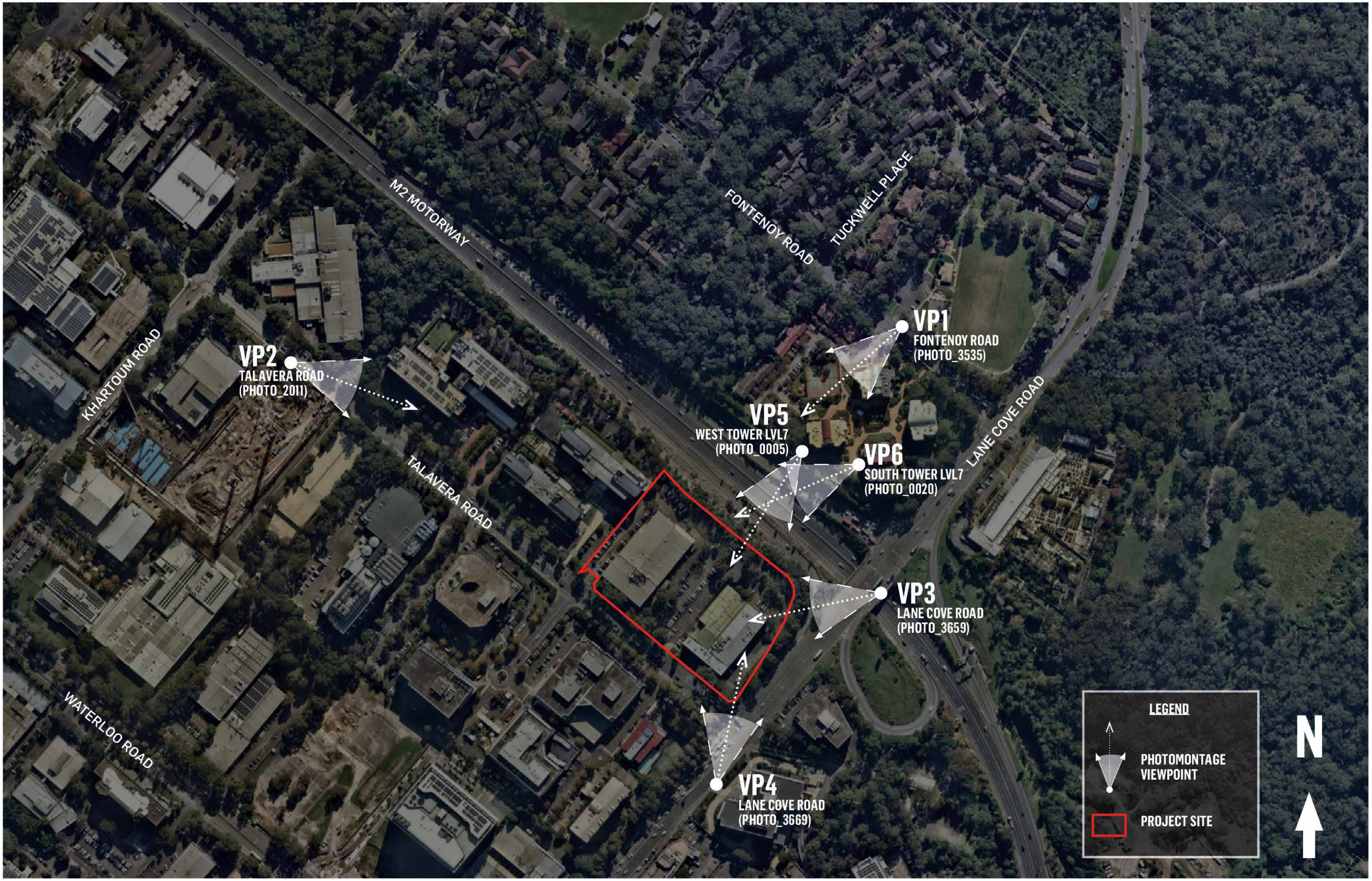
- Point cloud and Digital Elevation Models from NSW Government Spatial Services datasets - Sydney 2020-05
- Aerial photography from Nearmap - 2022-05-17
- Proposed architecural drawings received from Architect - 2024-11-08
- Proposed 3D model received from Architect - 2024-11-13

METHODOLOGY :

Photomontages provided on the following pages have been produced with a high degree of accuracy to satisfy the intent of the requirements as set out in the practice direction for the use of visual aids in the NSWLEC Policy: Use of Photomontages and Visualisation Tools, May 2024 (the Policy).

The process for producing these photomontages are outlined below:

- Photographs have been taken on site using a full-frame digital camera coupled with a quality lens in order to obtain high resolution photos whilst minimising image distortion. Photos for VP1-4 are taken handheld at a standing height of 1.65m above natural ground level. Photos for VP5 & 6 have been taken using a drone at an elevation equivalent to the view from the upper floor (level 7) of the existing towers.
- Photos have generally been taken at a standard focal length of 50mm or at 24mm to cover a wider context. 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.
- 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 photomontage, the photo's survey 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 and 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 photomontage 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 photomontage.



URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

PHOTOMONTAGES - VIEW LOCATION MAP

DATE: 2024-11-14
JOB NO: P0041214
DWG NO: VP_MAP
REV: -

ORIGINAL PHOTO EXTENT - 50MM STANDARD VIEW

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP1 : (PHOTO 3535) LOOKING SOUTH-WEST, FONTENOY ROAD | EXISTING PHOTO : 2022-07-08 12:03 AEST

DATE: 2024-09-23
JOB NO: P0041214
DWG NO: VP_1A
REV: -

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP1 : (PHOTO 3535) LOOKING SOUTH-WEST, FONTENOY ROAD | CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-09-23
JOB NO: P0041214
DWG NO: VP_1B
REV: -

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP1 : (PHOTO 3535) LOOKING SOUTH-WEST, FONTENOY ROAD | PHOTOMONTAGE

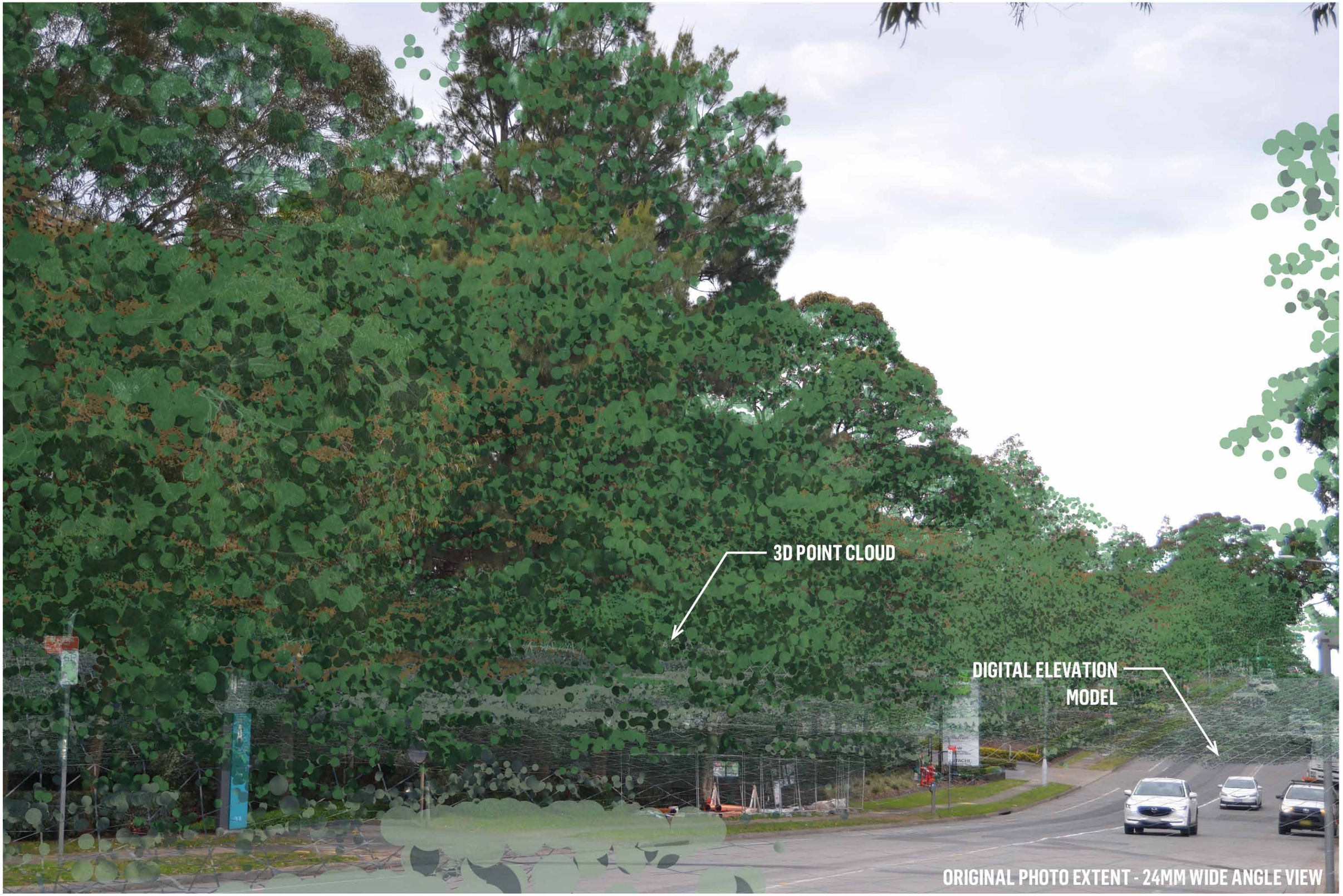
DATE: 2024-11-14
JOB NO: P0041214
DWG NO: VP_1C
REV: -

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP2 : (PHOTO 2011) LOOKING ESE ACROSS TALAVERA ROAD | EXISTING PHOTO : 2022-08-25 14:22 AEST

DATE: 2024-09-23
JOB NO: P0041214
DWG NO: VP_2A
REV: -



URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP2 : (PHOTO 2011) LOOKING ESE ACROSS TALAVERA ROAD | CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-09-23
JOB NO: P0041214
DWG NO: VP_2B
REV: -

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP2 : (PHOTO 2011) LOOKING ESE ACROSS TALAVERA ROAD | PHOTOMONTAGE

DATE: 2024-11-14
JOB NO: P0041214
DWG NO: VP_2C
REV: -

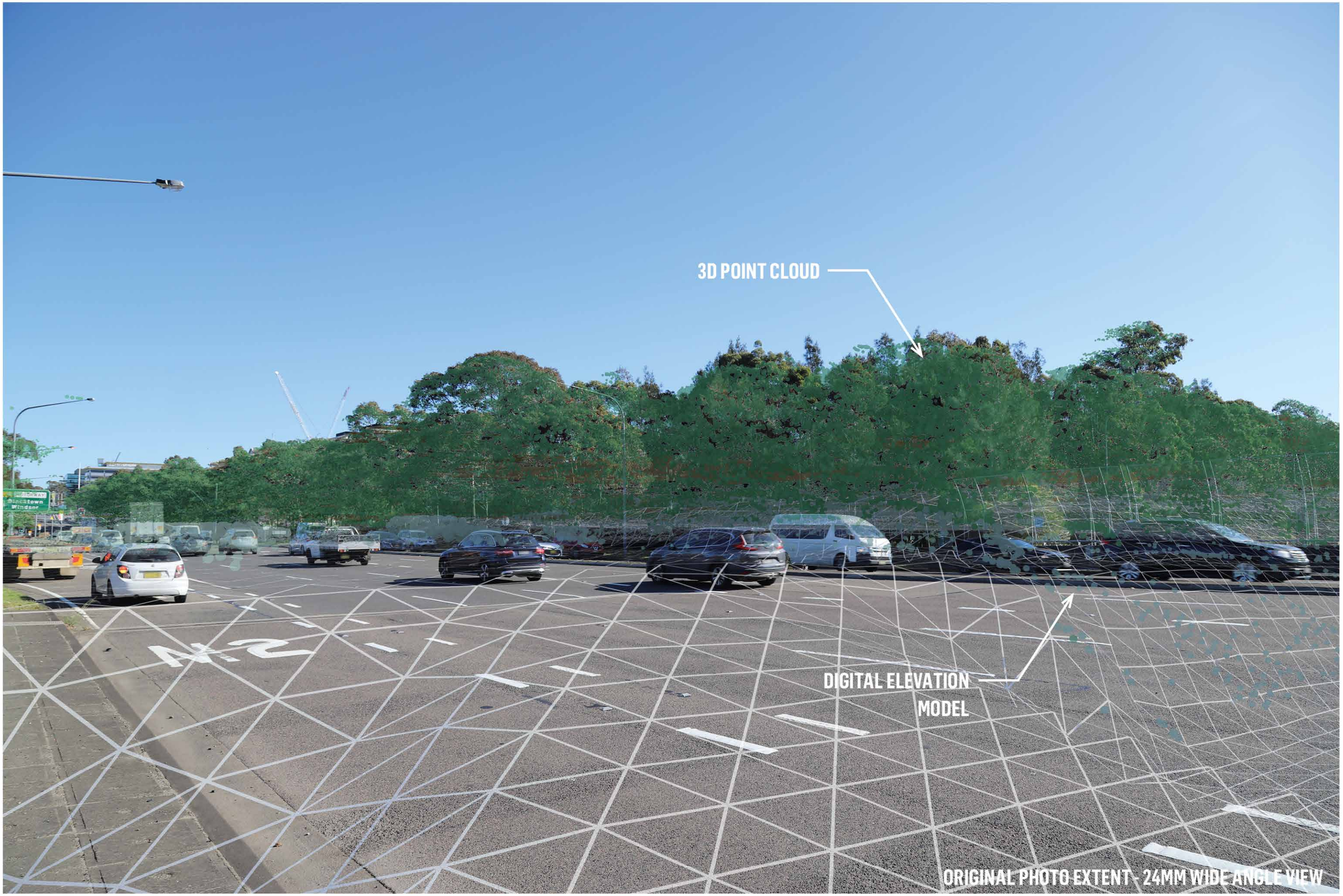
ORIGINAL PHOTO EXTENT - 24MM WIDE ANGLE VIEW

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP3 : (PHOTO 3659) LOOKING WSW, LANE COVE ROAD | EXISTING PHOTO : 2022-07-15 13:34 AEST

DATE: 2024-09-23
JOB NO: P0041214
DWG NO: VP_3A
REV: -



URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP3 : (PHOTO 3659) LOOKING WSW, LANE COVE ROAD | CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-09-23
JOB NO: P0041214
DWG NO: VP_3B
REV: -

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP3 : (PHOTO 3659) LOOKING WSW, LANE COVE ROAD | PHOTOMONTAGE

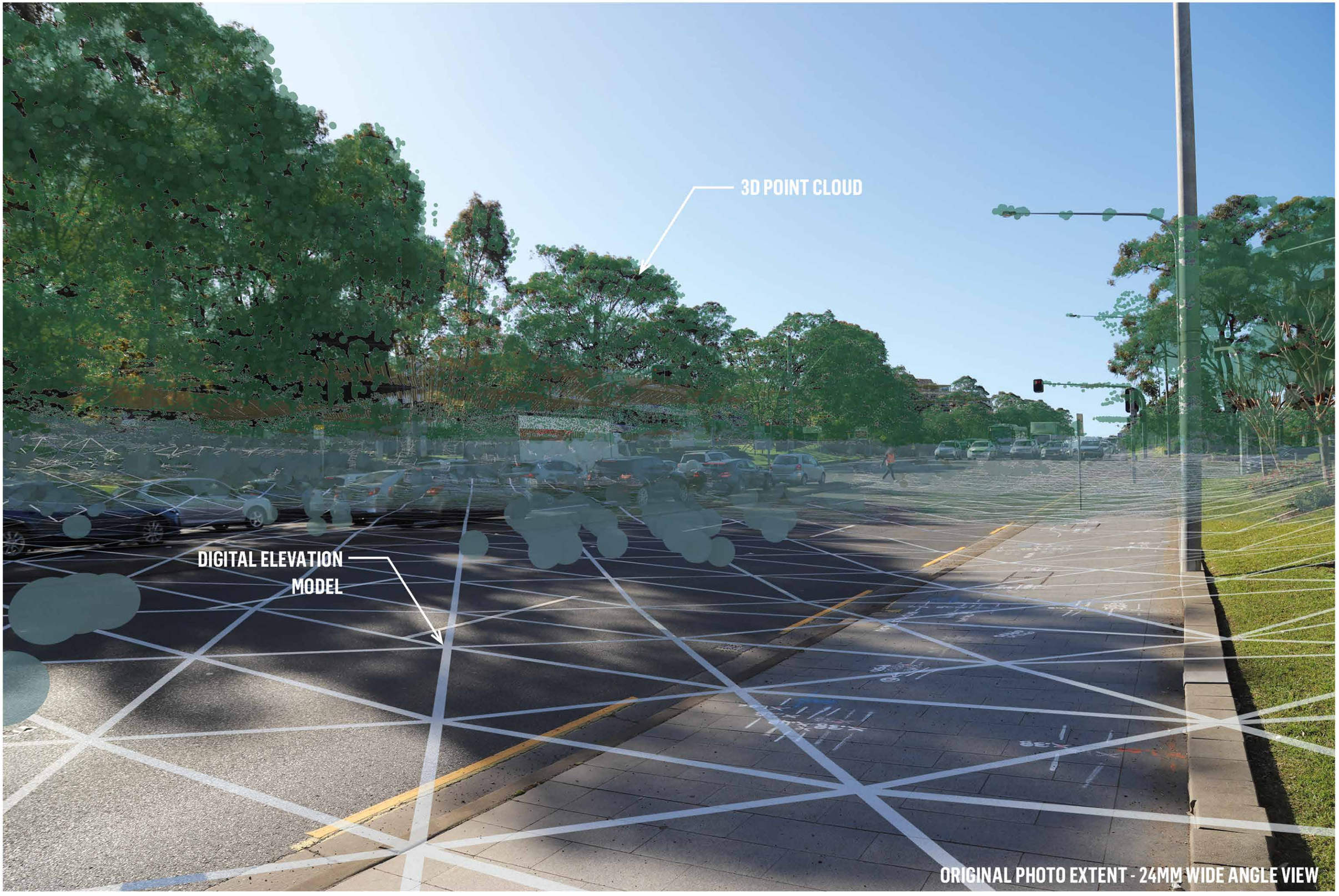
DATE: 2024-11-14
JOB NO: P0041214
DWG NO: VP_3C
REV: -

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP4 : (PHOTO 3669) LOOKING NNE, LANE COVE ROAD | EXISTING PHOTO : 2022-07-15 13:40 AEST

DATE: 2024-09-23
JOB NO: P0041214
DWG NO: VP_4A
REV: -



URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP4 : (PHOTO 3669) LOOKING NNE, LANE COVE ROAD | CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-09-23
JOB NO: P0041214
DWG NO: VP_4B
REV: -

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP4 : (PHOTO 3669) LOOKING NNE, LANE COVE ROAD | PHOTOMONTAGE

DATE: 2024-11-14
JOB NO: P0041214
DWG NO: VP_4C
REV: -

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP5 : (PHOTO 0005) 1-15 FONTENOY RD WEST TOWER (LVL7), LOOKING SSW ACROSS M2 MOTORWAY | EXISTING PHOTO : 2022-08-26 08:46 AEST

DATE: 2024-09-23
JOB NO: P0041214
DWG NO: VP_5A
REV: -

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP5 : (PHOTO 0005) 1-15 FONTENOY RD WEST TOWER (LVL7), LOOKING SSW ACROSS M2 MOTORWAY | CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-09-23
JOB NO: P0041214
DWG NO: VP_5B
REV: -

URBIS

4 & 6-10 TALAVERA RD, MACQUARIE PARK NSW - VISUAL ASSESSMENT

VP5 : (PHOTO 0005) 1-15 FONTENOY RD WEST TOWER (LVL7), LOOKING SSW ACROSS M2 MOTORWAY | PHOTOMONTAGE

DATE: 2024-11-14
JOB NO: P0041214
DWG NO: VP_5C
REV: -