MPARK TALAVERA ROAD DATA CENTRE

VISUAL IMPACT ASSESSMENT

SSDA-63235720

PREPARED FOR

STOCKLAND

DECEMBER 2024

FINAL

URBIS

URBIS STAFF RESPONSIBLE FOR THIS REPORT:

Director:	Jane Maze-Riley
Project Team:	Nicholas Sisam, Manuel Alvelo
Project Code:	P0050207
Reference:	M Park Talavera Road Data Centre_VIA
Version:	Rev A
Report Status:	Final
Date:	December 2024

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.

CONTENTS

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 1-5 Khartoum Road, Macquarie Park in the Ryde Council Local Government Area (LGA).

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 with intervening built form within the surrounding area limiting views towards the site.
- The proposal is most visible in close views from the immediately surrounding roads, principally Talavera Road.
- Of the 4 public domain views assessed, three were rated as low and one as low-medium.

Analysis of the proposal found that:

- The proposed development has medium-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.
- 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.

This report 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 on behalf of Stockland to accompany a State Significant Development Application (SSDA) for a data centre development.

The site is located at 1-5 Khartoum Road, Macquarie Park, within the City of Ryde Local Government Area (LGA), approximately 12km north-west of the Sydney CBD and proximate to the commercial centres of Chatswood and Norwest. The area subject of the data centre development is 10,015sqm (legally described as Part Lot 2 DP 1043041). Specifically, the data centre development relates to the eastern portion of Lot 2 DP 1043041 as shown in Figure 1.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 17 October 2023 issued for the SSDA (SSD-63235720). Specifically, this report has been prepared to respond to the SEARs requirement issued below.

Table 2 SEARs Compliance.

Description of Requirement	Section 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

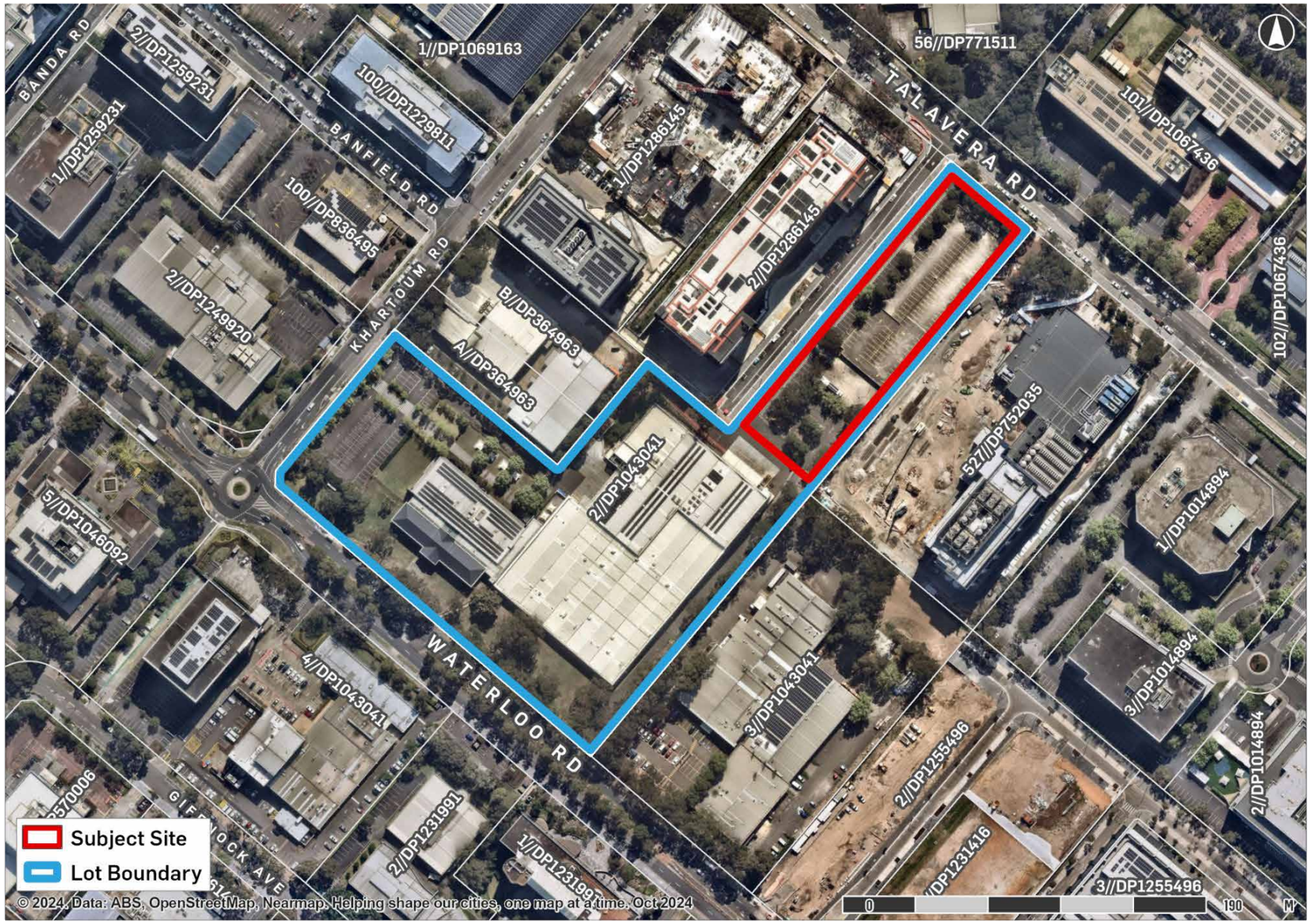


Figure 1 Site location.

1.2 PROPOSED DEVELOPMENT

The project comprises the demolition of the existing car park and construction of a data centre development including the following key components:

- Demolition of existing car park and associated structures.
- Site preparation works including tree removal and earthworks.
- Construction and operation of a six-storey data centre development, with a maximum height of 45 metres and a combined total gross floor area (GFA) of approximately 19,434sqm including.
    - Lobby, meeting rooms and ancillary space: 6,010sqm
    - Offices: 830sqm
    - Three storeys of technical data floor space accommodating 12 data houses: 12,594sqm
- Vehicle access via Road 22 (Murrell Street) with 25 parking spaces within the building footprint.
- Associated landscaping including trees, shrubs and grasses.
- Business identification signage zones.
- Provision of required utilities, including diesel generator back up power system.

Figure 2 North-east elevation.

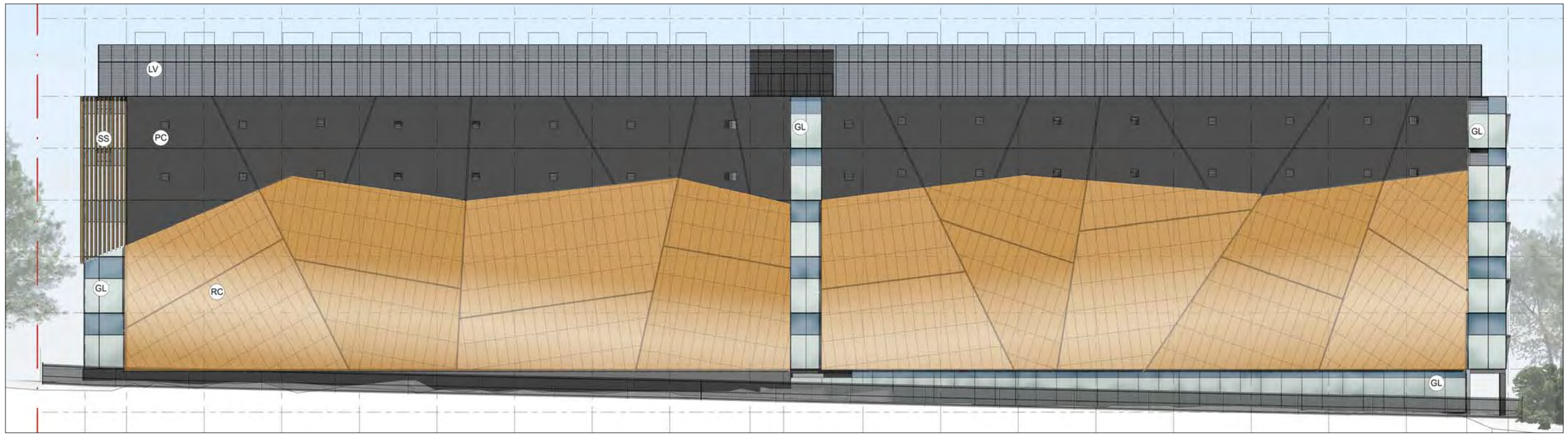


Figure 4 South-east elevation.

Figure 3 North-west elevation.

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 Impact 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.

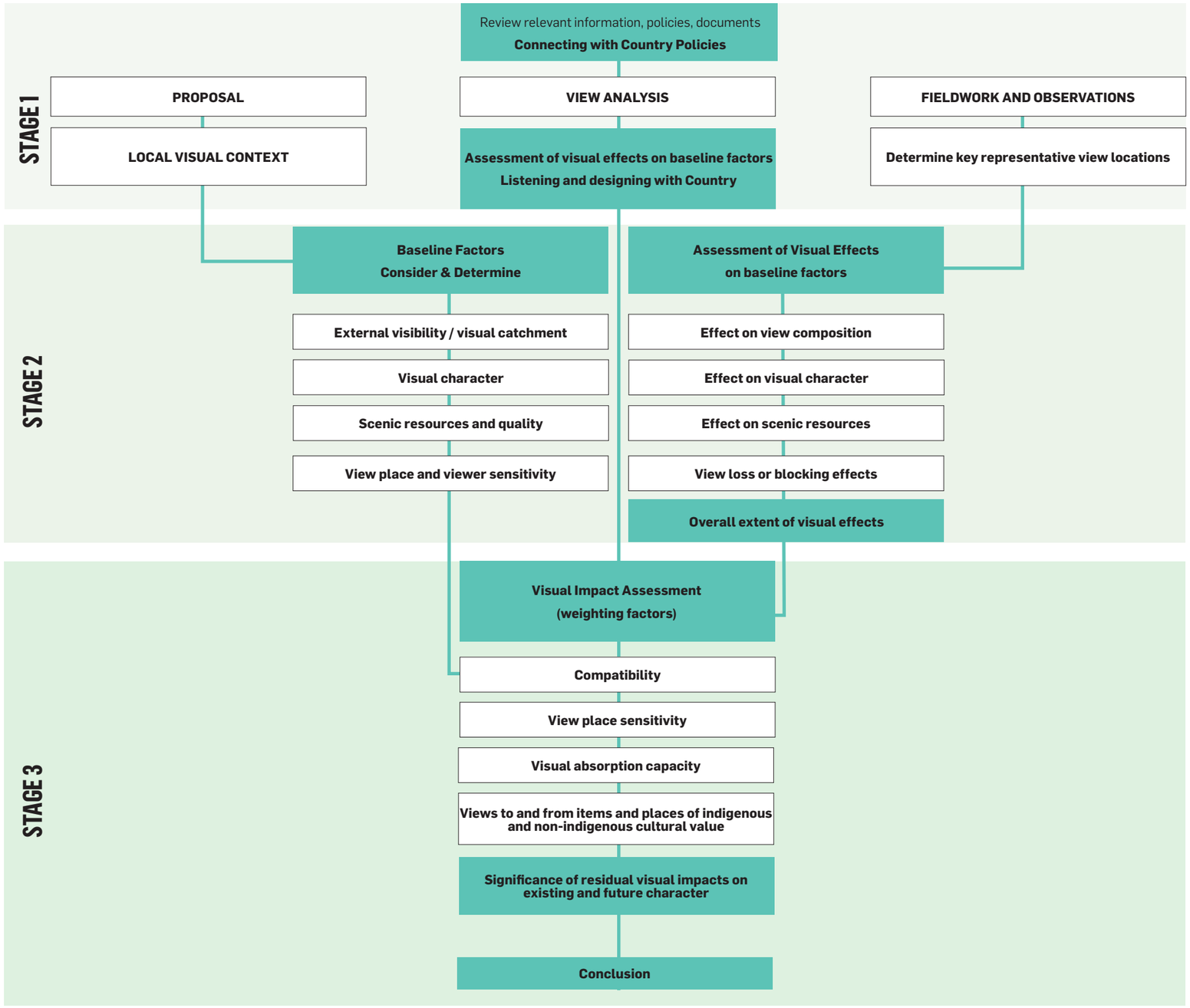


Figure 5 Methodology flowchart.

2.2 VISUAL CONTEXT

The visual context of the surrounding area is characterised by large scale bulky forms, predominantly in the form of residential towers and commercial offices as well as Macquarie Centre which is located north-west of the site. North-east of the site is characterised by commercial suites bordering the M2 Motorway which separates commercial buildings from Lane Cove River and National Park.

North

The immediate visual context north of the site includes large, bulky commercial buildings surrounded by hardstand areas and at grade parking facilities, separated from the street by deep, well-landscaped setbacks. The lots immediately south, east and west of the site, are similarly characterised.

In visual terms, development in the vicinity is generally consistent in scale and form, with some variation in height as the area transitions to accommodate greater density.

South

The area south of Waterloo Road, and south of the site is characterised by large scale commercial buildings and residential towers, bordered by Epping Road to the south. Green space is generally limited to landscaped setbacks street tree vegetation and riparian vegetation along a small creek west of the site, on the southern side of Waterloo Road. The northern side of the riparian corridor is characterised by 2-3 storey residential flat buildings and a small public park, Wilga Park. Macquarie University is situated north-west of the intersection of Herring Road and Waterloo Road.

East

The visual context east of the site is influenced by the intersection of Lane Cove Road and the M2 Motorway. Lane Cove Road is approximately 430m south-east and runs parallel with the southern boundary of the site. It is a major arterial road that facilitates 6 lanes of traffic and is characterised by expansive lots comprising substantial landscaping and hardstand areas and large-scale commercial buildings.

2.3 VISUAL CATCHMENT

Potential visibility of the proposal was determined by Urbis during fieldwork observations of the site from a range of distance classes (close, medium and distant views) and an indicative visual catchment from Google Earth.

The potential visual catchment (extent of visibility) is influenced by the underlying topography, surrounding development, road alignment, and vegetation. Therefore, the potential visual catchment is constrained to immediate streetscapes and to a lesser extent form surrounding streets.

Significant visibility to proposed built form is unlikely to extend beyond the following locations which mark the approximate edges of the visual catchment.

- The intersection of Waterloo Road and Khartoum Road
- The intersection of Khartoum Road and Talavera Road
- Sections of Waterloo Road and Talavera Road where oblique views down road corridors or over / between intervening lots and elements including built-form and vegetation.

Key Observations

- Views to the site are generally constrained to Waterloo Road and Khartoum Road, and Talavera Road.
- The highly urbanised nature of Macquarie Park limits the ability to perceive the entirety of the proposal.
- Views of the proposal will typically involve seeing parts or sections of the proposal as opposed to being able to view the majority or entirety of the proposal.

Private Domain

Residential towers are located within the visual catchment of the subject site and include:

- Prime Macquarie Park located at the corner of Waterloo Road and Banda Road
- Park One and Natura Apartments at the corner of Waterloo Road and Byfield Street which are all approximately 20 storeys in height.

Potential south-easterly views form upper-level units within the Prime development, may include the proposed development, depending on the intervening blocking effects of a commercial tower at 2 Banfield Road. Similarly, east-facing rooms from the Park One Apartments may also experience views to the site over and between intervening built form. There may be potential visibility in highly oblique views from north-east facing rooms of Park One Apartments.

Private domain views potentially impacted by the proposal are unlikely to be characterised by compositions of high scenic quality as defined in *Tenacity* and are likely to be district views to the north-east, south and south-west.

2.4 DOCUMENTED VIEWS

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

2.5 HERITAGE ITEMS

The site is located south-east of local heritage items 'Macquarie Centre' and 'Macquarie University' and north-west of Northern Suburbs Cemetery under the Ryde LEP 2014.

No part of the site falls within, or is in proximity to, a listed heritage conservation area. Though Macquarie Centre and the southern boundary of Macquarie University are within proximity to the site, the significance of these heritage items is not vested in their physical appearance or visual contribution to the area and is therefore at low risk of potential visual impact.

2.6 FIELDWORK INSPECTED VIEWS

The views were documented during fieldwork observations surrounding the site.

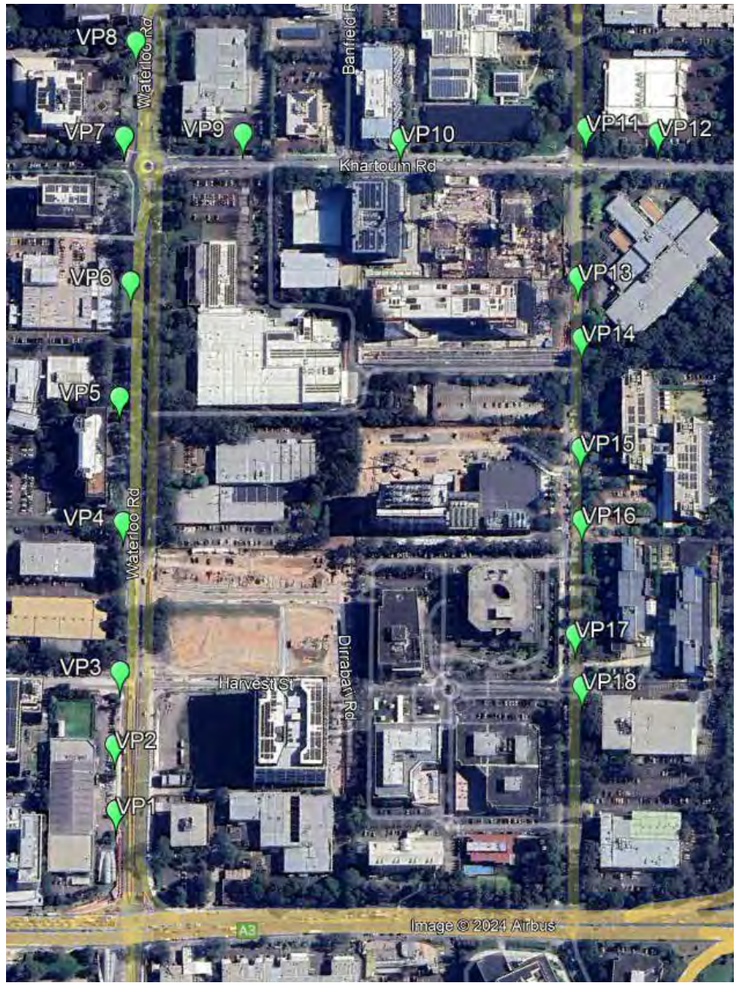


Figure 6 Fieldwork view locations.

Photo 1. View north from outside 36 Waterloo Road near station exit.

Photo 2. View northt from outside 36 Waterloo Road.

Photo 3. View north from intersection of Waterloo Road and Coolinga Street.

Photo 4. View north-east from outside 50 Waterloo Road.

Photo 5. View north-east from outside 52 Waterloo Road.

Photo 6. View north-east from outside 60 Waterloo Road.

Photo 7. View east from Waterloo Road and Khartoum Road roundabout.

Photo 8. View east from outside 68 Waterloo Road.

Photo 9. View east from 85 Waterloo Road.

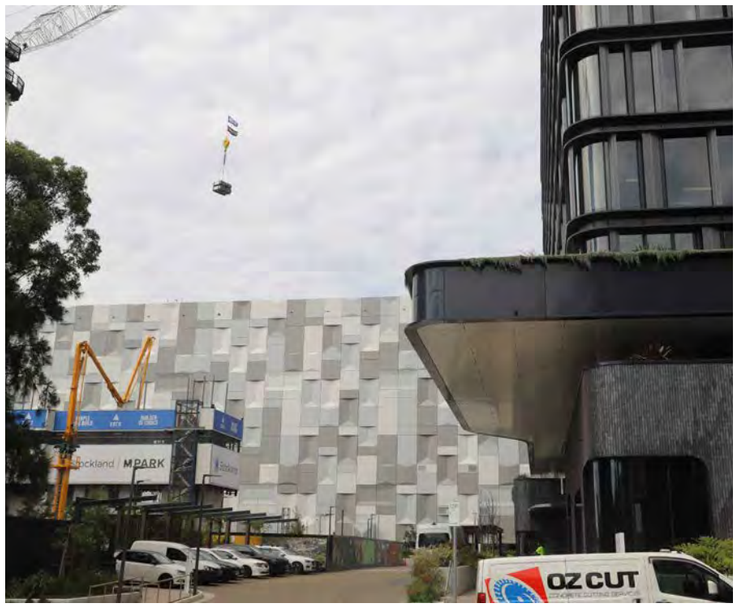


Photo 10. View south-east from outside 10-14 Khartoum Road.

Photo 11. View south-east from Talavera Road and Khartoum Road intersection.

Photo 12. View south-east from outside 54 Talavera Road.

Photo 13. View south from outside 40 Talavera Road.

Photo 14. View south from outside 12 Talavera Road.

Photo 15. View west from outside 12 Talavera Road.

Photo 16. View north-west from entrance to 12 Talavera Road.

Photo 17. View north-west from opposite 15 Talavera Road.

Photo 18. View north-west from outside 6-10 Talavera Road.

03 BASELINE VISUAL ANALYSIS & PRIVATE VIEWS

3.2 VISUAL CHARACTER OF THE SITE

The site is located in the suburb of Macquarie Park, northwest of Lane Cove National Park. Macquarie Park is surrounded by the suburbs of North Ryde (south), Lindfield (east), Eastwood (west) and Pymble and Turramurra to the north.

The site is surrounded by major roadways, located approximately 500m north-west of Lane Cove Road, 180m south-east of the M2 Motorway and 500m north-east of Epping Road. The underlying topography of the surrounding area is undulating.

The site area is located on a local highpoint where the north-eastern section of the site that aligns to Khartoum Road declines in elevation to the north-east. Levels across the broader lot vary where the land aligned to Waterloo Road is generally higher than that at Talavera Road.

The site includes commercial office suites which are housed in visually distinct double storey brick buildings that present as two long, continuous forms fronting Waterloo Road. The western building is approximately 50m in length along Waterloo Road and 40m deep. The second (eastern) building is linked to the first via a glass atrium structure and is approximately 80m in length along Waterloo Road and 130m deep.

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 surrounding context 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 within a highly urbanised visual environment.

No part of the site falls within, or is in proximity to, a listed heritage conservation area. Though Macquarie Centre and the southern boundary of Macquarie University are within proximity to the site, the significance of these heritage items is not vested in their physical appearance or visual contribution to the area and is therefore at low risk of potential visual impact.

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 PUBLIC 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, 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 PRIVATE VIEW PLACE 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.

Residential towers are located within the visual catchment of the subject site and include:

- Prime Macquarie Park (ground plus 19 levels) located at the corner of Waterloo Road and Banda Road
- Park One (ground plus 20 levels) and Natura Apartments (ground plus 18 levels) at the corner of Waterloo Road and Byfield Street.

Potential south-easterly views form upper-level units within the Prime development may include the proposed development, depending on the intervening blocking effects of a commercial tower at 2 Banfield Road. Similarly, east-facing rooms from the Park One Apartments may also experience views to the site over and between intervening built form. There may be potential visibility in highly oblique views from north-east facing rooms of Park One Apartments.

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 4 public view locations for further analysis.

View No.	VIEWPOINT LOCATION
View 1	VIEW NORTH FROM OUTSIDE 36 WATERLOO ROAD NEAR THE STATION EXIT
View 2	VIEW SOUTH-EAST FROM OUTSIDE 54 TALAVERA ROAD
View 3	VIEW SOUTH FROM OUTSIDE 40 TALAVERA ROAD
View 4	VIEW NORTH-WEST FROM OPPOSITE 15 TALAVERA ROAD

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.

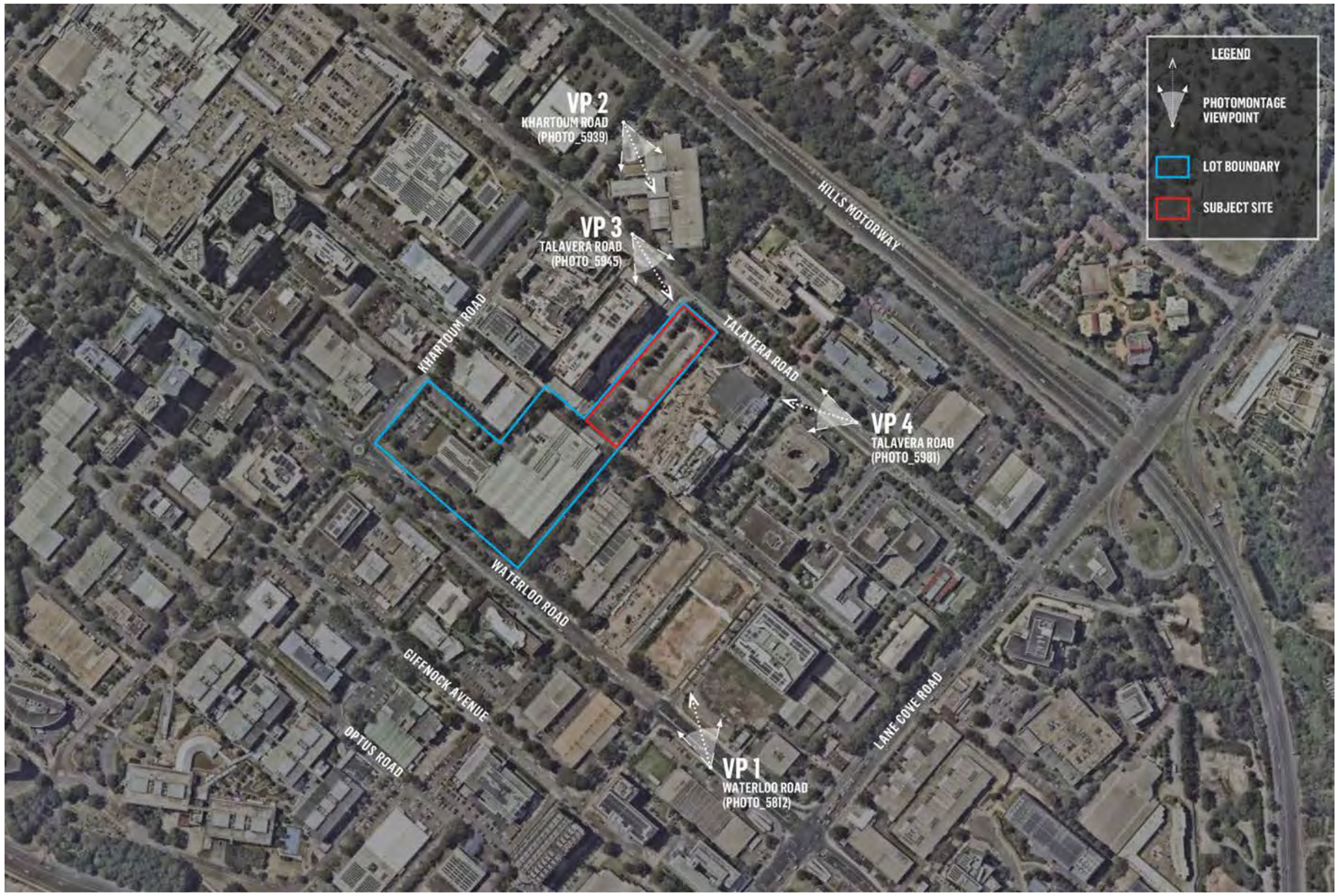


Figure 8 Viewpoint location map.

VIEW 1

VIEW NORTH FROM OUTSIDE 36 WATERLOO ROAD NEAR THE STATION EXIT

DISTANCE CLASS

- Medium
- 390m

EXISTING COMPOSITION OF THE VIEW

The foreground composition is characterised by the multi-lane Waterloo Road carriageway.

The mid-ground composition includes an open expanse of a construction site surrounded by contemporary built-form development and vegetation in neighbouring properties.

Long distance views include partial views of upper sections of development north of the proposal site in the neighbouring lot and at 11 Khartoum Road.

VISUAL EFFECTS OF THE PROPOSED DEVELOPMENT ON THE COMPOSITION AS MODELLED

A partial view of a section of the proposal is visible above intervening vegetation. Existing development south of the site in the neighbouring lot blocks views of the northern section of the data centre.

The proposal blocks views of existing neighbouring development but does not block views to any scenic or highly valued features or heritage items.

Note: The view location currently has a large number of daily users who will have this view available to them as a result of vehicles and pedestrians using Waterloo Road and Metro users entering and exiting the station. The data centre is likely to not be visible once development in the vacant lot is completed.

Visual effects of proposed development (quantum of change)	
Visual Character	low
Scenic Quality	low
View Composition	low
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)
Viewing Period	low (down-weight)
Viewing Distance	medium (neutral)

See section 5.9 for overall Visual Impact Rating.

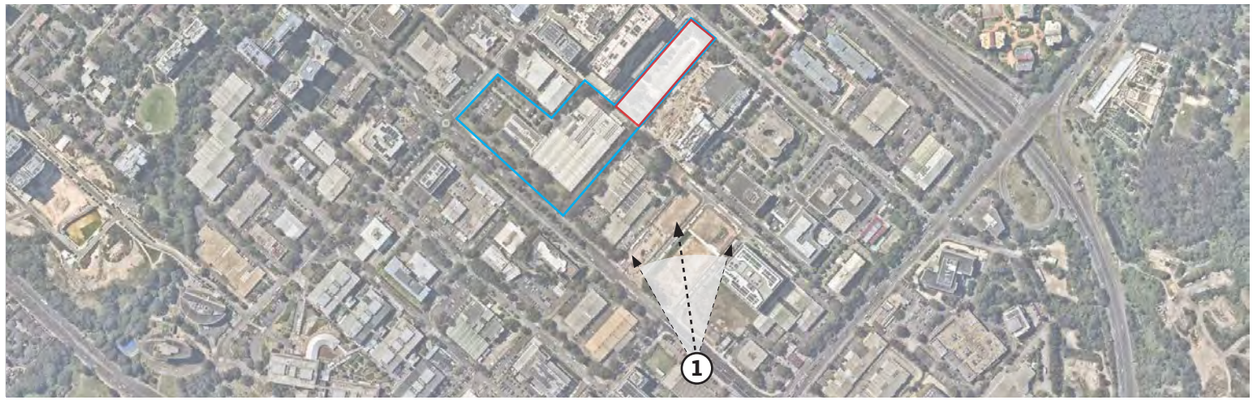


Figure 9 Viewpoint 1 location.

Figure 10 Viewpoint 1 existing view.

Figure 11 Viewpoint 1 photomontage.

VIEW 2

VIEW SOUTH-EAST FROM OUTSIDE 54 TALAVERA ROAD

DISTANCE CLASS

- Medium
- 240m

EXISTING COMPOSITION OF THE VIEW

The foreground composition includes the Khartoum Road carriageway and road reserve.

The mid-ground composition is characterised by low height commercial development and surrounding hardstand behind vegetation along the property boundary which filters views of the development.

Long distance views beyond are blocked by mid-ground elements, with only a partial view of development neighbouring the proposal site visible to the right of the composition.

VISUAL EFFECTS OF THE PROPOSED DEVELOPMENT ON THE COMPOSITION AS MODELLED

A small section of the western elevation is visible above intervening built-form development. Vegetation in the foreground blocks the northern elevation from view, with development north of the site also blocking views to the mid and southern section of the western elevation.

The proposal blocks a section of open sky and does not block views to any scenic or highly valued features or heritage items.

Visual effects of proposed development (quantum of change)	
Visual Character	low
Scenic Quality	low
View Composition	low
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)
Viewing Period	low (down-weight)
Viewing Distance	medium (neutral)

See section 5.9 for overall Visual Impact Rating.

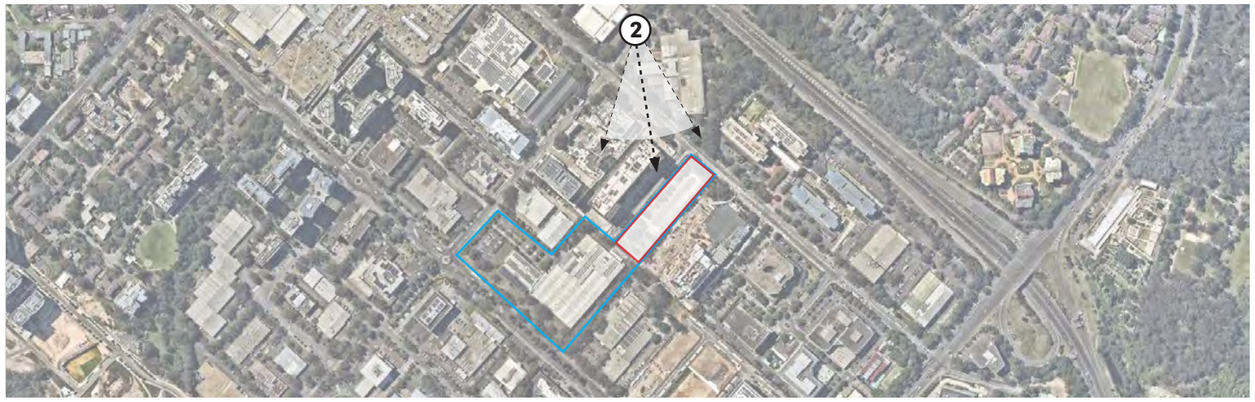


Figure 12 Viewpoint 2 location.

Figure 13 Viewpoint 2 existing view.

Figure 14 Viewpoint 2 photomontage.

VIEW 3

VIEW SOUTH FROM OUTSIDE 40 TALAVERA ROAD

DISTANCE CLASS

- Medium
- 110m

EXISTING COMPOSITION OF THE VIEW

The composition is characterised by the Talavera Road carriageway. To both sides of the road is large, mature trees within the road reserve and private properties that block or heavily filters views to built-form development beyond

Long distance views are almost entirely blocked by vegetation and built-form, with only a narrow view corridor visible along the road corridor.

VISUAL EFFECTS OF THE PROPOSED DEVELOPMENT ON THE COMPOSITION AS MODELLED

The proposal introduces new, contemporary built-from to the mid-ground composition. The data centre appears as a comparable development in terms of height and scale to the neighbouring development to the right of the composition at 8 Murrell Street.

The retention of existing trees along the northern site boundary filters views to the lower and mid sections of the northern elevation and decreases the perception of additional built-form.

The proposal blocks a section of open sky beyond and does not block views to any scenic or highly valued features or heritage items.

Visual effects of proposed development (quantum of change)	
Visual Character	low-medium
Scenic Quality	low
View Composition	low-medium
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)
Viewing Period	low (down-weight)
Viewing Distance	medium (neutral)

See section 5.9 for overall Visual Impact Rating.

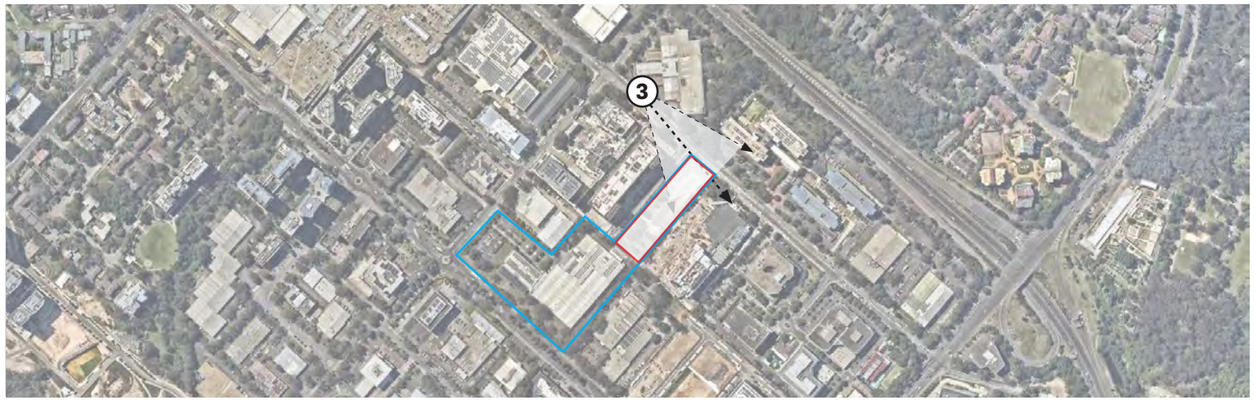


Figure 15 Viewpoint 3 location.

Figure 16 Viewpoint 3 existing view.

Figure 17 Viewpoint 3 photomontage.

VIEW 4

VIEW NORTH-WEST FROM OPPOSITE 15 TALAVERA ROAD

DISTANCE CLASS

- Medium
- 200m

EXISTING COMPOSITION OF THE VIEW

The composition is characterised by vegetation along Talavera Road and within the property south of the site.

Partial views of existing development is visible to the left of the view, as is upper sections of a recently constructed development north of the site which is visible above intervening vegetation.

VISUAL EFFECTS OF THE PROPOSED DEVELOPMENT ON THE COMPOSITION AS MODELLED

The proposal introduces new, contemporary built-from to the mid-ground composition where sections of eastern elevation are partially visible as is an oblique view of the northern elevation.

The retention of existing trees along the northern site boundary filters views to the lower and mid sections of the northern elevation and decreases the perception of additional built-form.

The proposal blocks built form development and a section of open sky beyond but does not block views to any scenic or highly valued features or heritage items.

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

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)
Viewing Period	low (down-weight)
Viewing Distance	medium (neutral)

See section 5.9 for overall Visual Impact Rating.

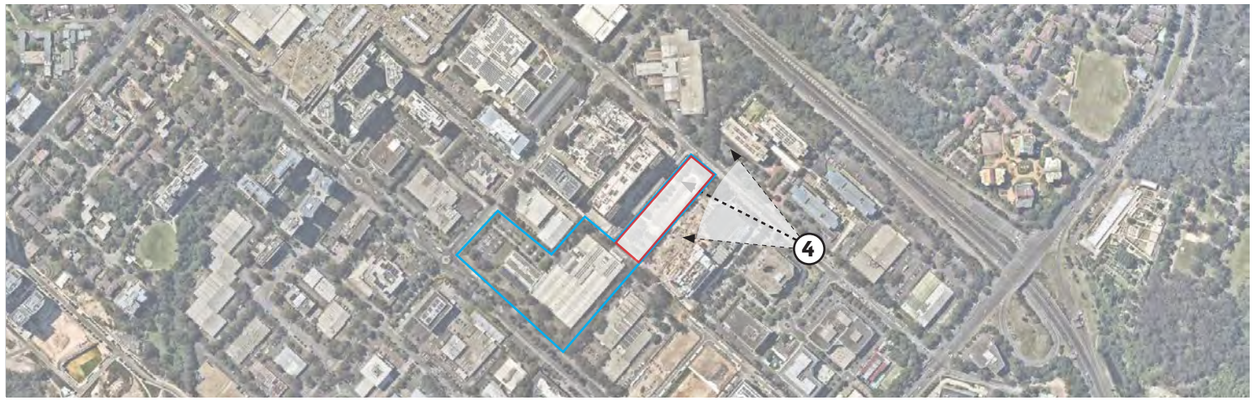


Figure 18 Viewpoint 4 location.

Figure 19 Viewpoint 4 existing view.

Figure 20 Viewpoint 4 photomontage.

05 VISUAL IMPACT ASSESSMENT

Having determined the extent of the visual change based on the 4 representative public domain 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 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-high 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.

A comparative analysis of the compatibility of similar items to the proposal with other locations in the area which have similar visual character and scenic quality or likely changed future character can give a guide to the likely future compatibility of the proposal in its setting.

The surrounding context 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.

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 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.

5.8 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	low	low-med	med-low
Scenic Quality	low	low	low	low
View Composition	low	low	low-med	med-low
View Blocking of Scenic Elements	low	low	low	low
Weighting Factors	**VP1**	**VP2**	**VP3**	**VP4**
Public Domain View Place Sensitivity	low	low	low	low
PAC	high	high	medium	medium
Compatibility with Urban & Visual Context	high	high	high	high
Viewing Period	low	low	low	low
Viewing Distance	medium	medium	medium	medium

5.9 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 - Low

VP4 - Low-medium.

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.

5.10 SUMMARY

- Analysis of 4 public domain photomontages concluded that:
    - the proposal creates low to medium-low visual effects.
    - 3 viewpoints were rated as low, and one as low-medium.
    - the proposal does not block views to any heritage items or areas of unique scenic quality.
- Physical Absorption Capacity (PAC) within the surrounding context is medium-high and lessens the visual effects and impacts of the proposal.
- The proposal has a high level of visual compatibility with the surrounding visual context.
- The proposal can be supported on visual impact grounds.

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

MACQUARIE PARK - STAGE 2
BUILDING E - DATA CENTRE

VISUAL ASSESSMENT | PHOTOMONTAGES

PREPARED FOR
STOCKLAND
DECEMBER 2024

PHOTOMONTAGES PREPARED BY:

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

DATE PREPARED :

4 December 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 - Associate Director, National Design

under direction from Jane Maze-Riley, Urbis - Director, National Design

CAMERA :

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

CAMERA LENS AND TYPE :

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

SOFTWARE USED :

- 3DSMax 2023 with Arnold 5.0 (3D Modelling and Render Engine)
- AutoCAD 2022 (2D CAD Editing)
- Globalmapper 25 (GIS Data Mapping / Processing)
- Photoshop CC 2024 (Photo Editing)

DATA SOURCES :

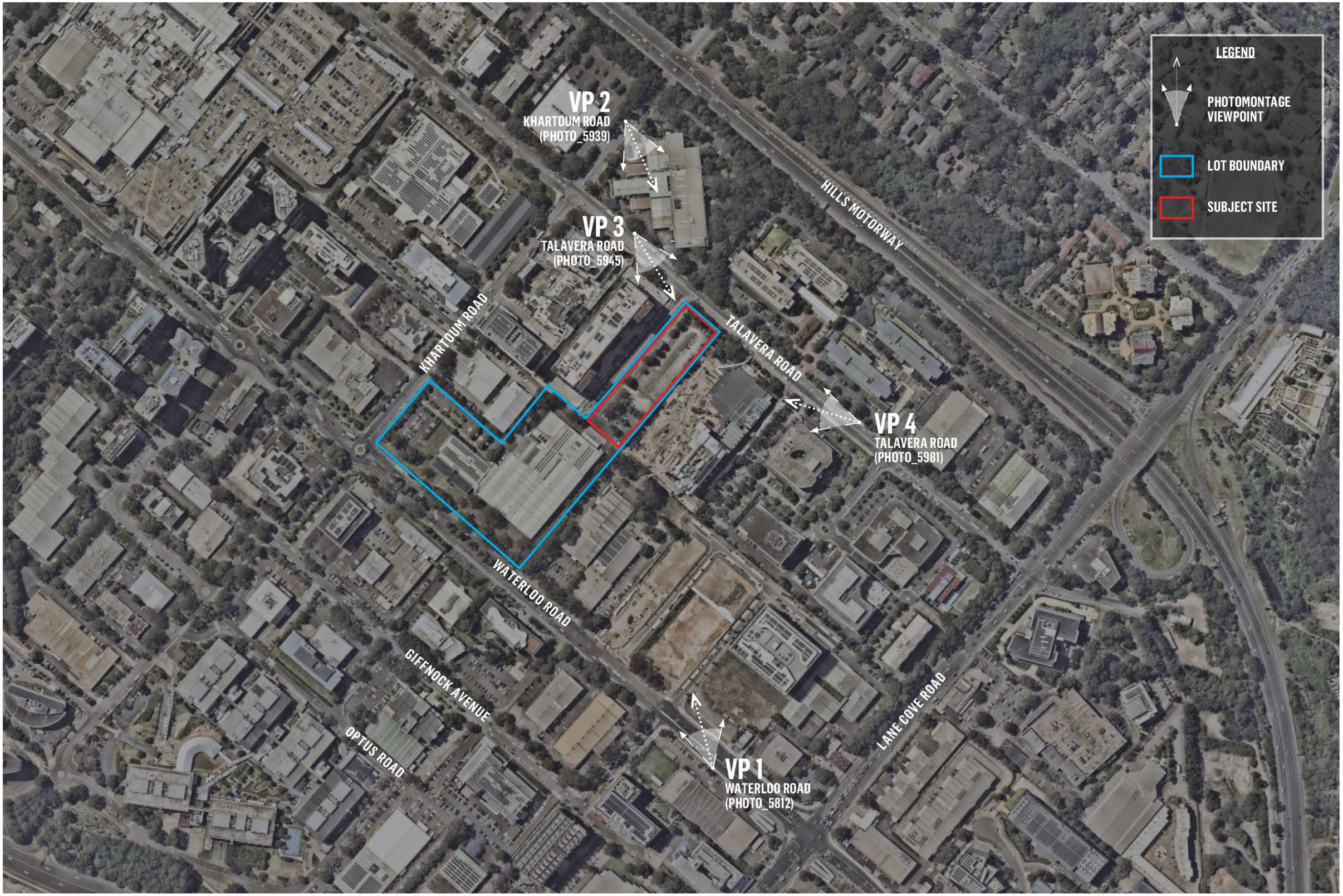
- Point cloud and Digital Elevation Models from NSW Government Spatial Services datasets (LAS and DEM) - Sydney 2020-05
- Aerial photography from Nearmap (geo-referenced JPG) - 2024-10-30
- Proposed 3D model received from Architect (Revit) - 2024-11-26

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 are taken handheld at a standing height of 1.6m above natural ground level. Photos have generally been taken at a standard focal length of 50mm, or 35mm to show 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 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 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 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

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

PHOTOMONTAGES - VIEW LOCATION MAP

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_MAP
REV: -

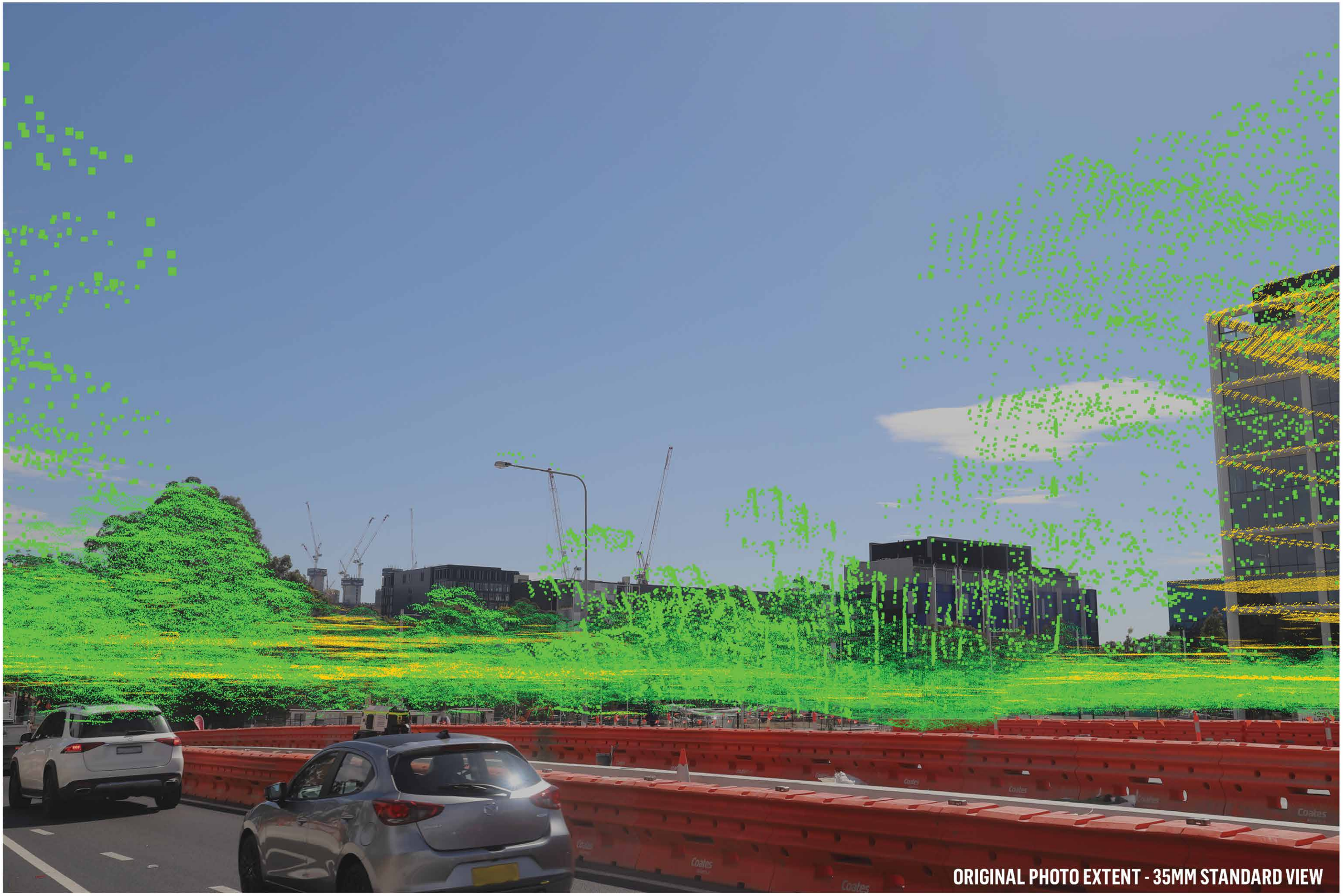
ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW

URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 1 (PHOTO 5812) : VIEW NORTH-WEST FROM OUTSIDE 36 WATERLOO ROAD | EXISTING CONDITIONS 2024-09-05 11:16 AEDT

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_1 A
REV: -



URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 1 (PHOTO 5812) : VIEW NORTH-WEST FROM OUTSIDE 36 WATERLOO ROAD | CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_ 1 B
REV: -

URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 1 (PHOTO 5812) : VIEW NORTH-WEST FROM OUTSIDE 36 WATERLOO ROAD | PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_1 C
REV: -

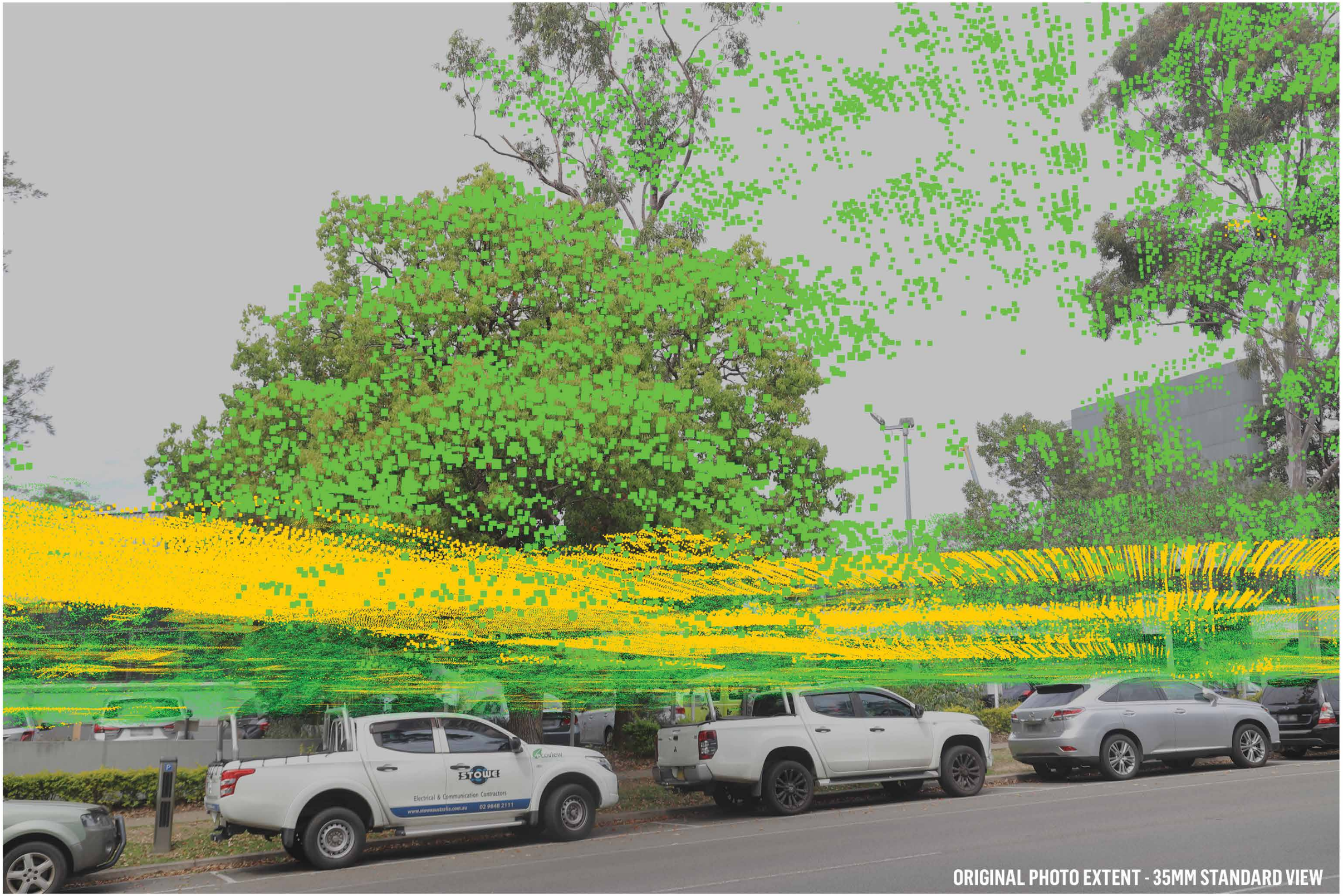
ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW

URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 2 (PHOTO 5939) : VIEW SOUTH-EAST FROM OUTSIDE 54 TALAVERA ROAD | EXISTING CONDITIONS 2024-09-05 11:40 AEDT

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_2 A
REV: -



ORIGINAL PHOTO EXTENT - 35MM STANDARD VIEW

URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 2 (PHOTO 5939) : VIEW SOUTH-EAST FROM OUTSIDE 54 TALAVERA ROAD | CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_2 B
REV: -

URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 2 (PHOTO 5939) : VIEW SOUTH-EAST FROM OUTSIDE 54 TALAVERA ROAD | PHOTOMONTAGE - PROPOSED DEVELOPMENT

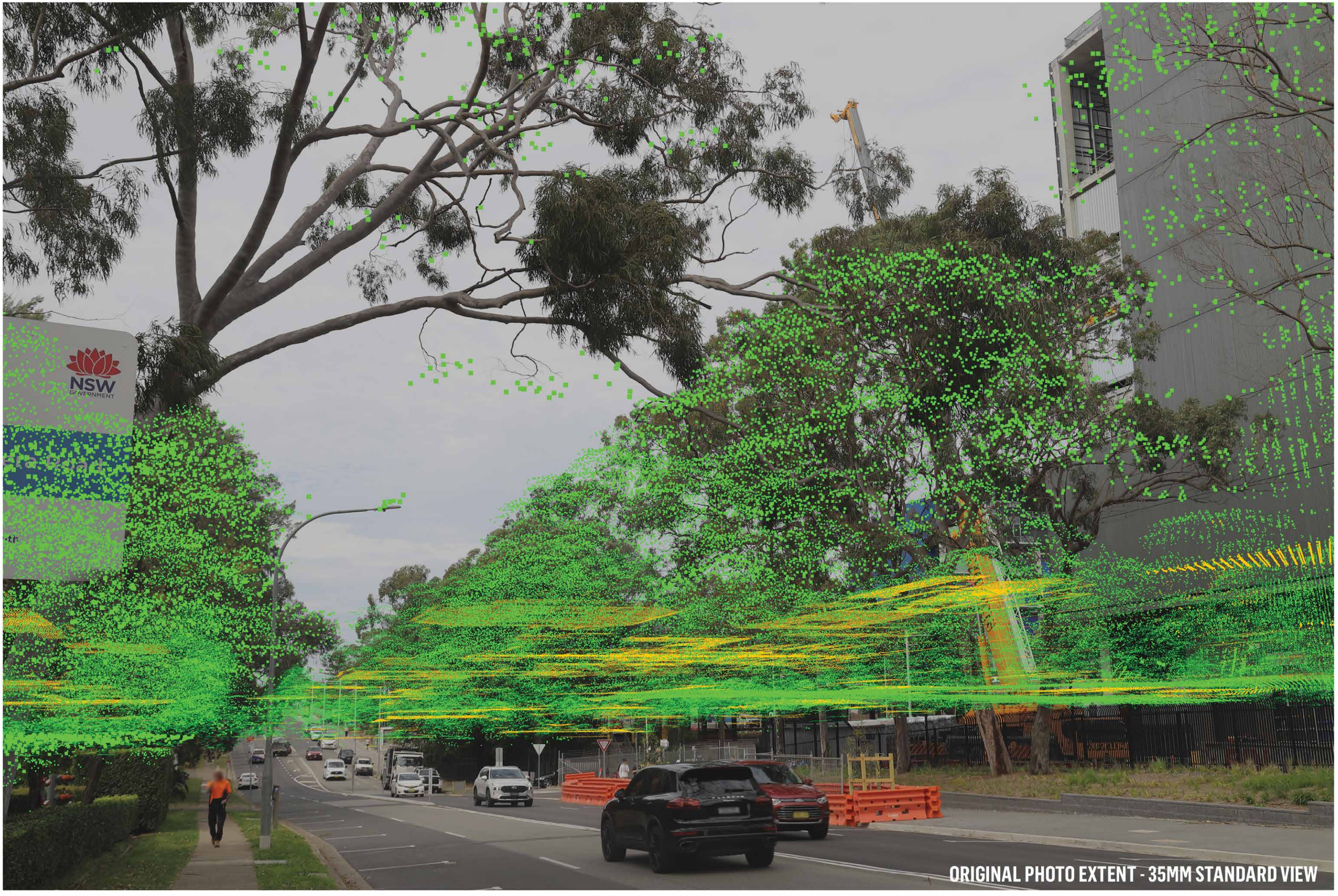
DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_2 C
REV: -

URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 3 (PHOTO 5945) : VIEW SOUTH FROM OUTSIDE 40 TALAVERA ROAD | EXISTING CONDITIONS 2024-09-05 11:52 AEDT

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_3 A
REV: -



URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 3 (PHOTO 5945) : VIEW SOUTH FROM OUTSIDE 40 TALAVERA ROAD | CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_3 B
REV: -

URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 3 (PHOTO 5945) : VIEW SOUTH FROM OUTSIDE 40 TALAVERA ROAD | PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_3 C
REV: -

URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 4 (PHOTO 5981) : VIEW NORTH-WEST FROM OPPOSITE 15 TALAVERA ROAD | EXISTING CONDITIONS 2024-09-05 12:01 AEDT

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_4 A
REV: -

ORIGINAL PHOTO EXTENT - 50MM STANDARD VIEW

URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 4 (PHOTO 5981) : VIEW NORTH-WEST FROM OPPOSITE 15 TALAVERA ROAD | CAMERA MATCH 3D MODEL TO PHOTO

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_4 B
REV: -

URBIS

MACQUARIE PARK STAGE 2 BUILDING E DATA CENTRE - VISUAL ASSESSMENT

VP 4 (PHOTO 5981) : VIEW NORTH-WEST FROM OPPOSITE 15 TALAVERA ROAD | PHOTOMONTAGE - PROPOSED DEVELOPMENT

DATE: 2024-12-04
JOB NO: P0054527
DWG NO: VP_4 C
REV: -