



207 Young Street, Waterloo, NSW

Visual impact photomontages and methodology report

2nd September 2025

VIRTUAL IDEAS

1. INTRODUCTION

This document, created by Virtual Ideas, aims to showcase the visual impact of the proposed development for 207 Young Street, Waterloo, NSW in comparison to the existing built form and site conditions.

2. VIRTUAL IDEAS EXPERTISE

Virtual Ideas is an experienced architectural visualisation company with over 15 years of expertise in crafting visual impact assessment content and reports for projects of significant magnitude, aligning with the standards set by local and state planning authorities.

Our reports have served as evidence in proceedings before both the Land and Environment Court and the Supreme Court of NSW. Our director, Grant Kolln, has provided expert testimony in visual impact assessment in the Supreme Court of NSW.

Virtual Ideas' methodologies and outcomes have undergone thorough scrutiny by court-appointed experts in relation to previous visual impact assessment submissions, consistently garnering recognition for their precision and reliability.

3. RENDERINGS METHODOLOGY

The following outlines the meticulous process employed by Virtual Ideas to produce the renderings that underpin this report.

3.1 DIGITAL 3D SCENE CREATION

Our initial stage involves crafting a precise, true-to-life digital 3D environment using Autodesk 3ds Max software, accurately scaled to real-world dimensions, and aligned to a standardised reference point utilising the MGA 56 GDA 2020 coordinate system.

To construct this environment, we combine various data sources, encompassing existing, approved and proposed building 3D models, along with site survey data. Further information regarding the origins of these data sources is provided in Appendices A, B, and C.

In cases where data sources lack alignment with the MGA-56 GDA 2020 coordinates, we employ identifiable features common across datasets, such as site boundaries and building outlines, which can be aligned with those already situated in the MGA-56 GDA 2020 framework.

Detailed accounts of the alignment processes for each data source are elaborated upon in Section 3.3.

3.2 SITE PHOTOGRAPHY

The site photography was captured by Virtual Ideas, with the respective viewpoint locations delineated on the viewpoint map in Section 4 of this document.

The selection of camera lens and composition of photography from each viewpoint was instructed by Ethos Urban after careful consideration of multiple factors. Paramount among these were the distance of the camera position from the site and the scale of the proposed development in relation to the surrounding built environment and landscape.

For these public domain photomontages, a 24mm lens was chosen. This lens choice ensures adequate visibility of both the proposed development and the immediate surrounding context, facilitating a thorough assessment of the proposed development's visual impact.

For certain scenarios, employing a 50mm lens may produce the most effective photomontage for assessing visual impact. The 50mm lens is often favoured for its close approximation to the human eye perception of distance. However, in instances where a 50mm lens fails to encompass an adequate surrounding context for comprehensive visual impact assessment, opting for a wider lens becomes imperative. All photographs are lens profile corrected in Camera RAW, which removes the distortion associated with the curvature of the lens.

Comprehensive metadata, including date, time, and lens information, is recorded during site photography. This critical data enables precise analysis and documentation of each photograph's attributes.

3.3 ALIGNMENT OF 3D SCENE

To accurately position the 3D scene within its geographical context, we employed the following data:

- 1. Site Survey Alignment: Utilising a provided site survey, we aligned the boundaries of the proposed buildings with geo-referenced data, ensuring precise positioning within the digital environment.
- 2. Camera Alignment: Cameras were aligned to surveyed positions supplied by CMS Surveyors, adhering to the MGA-56 GDA 2020 coordinate system. This meticulous alignment ensured that viewpoints captured within the 3D scene accurately reflected real-world perspectives.

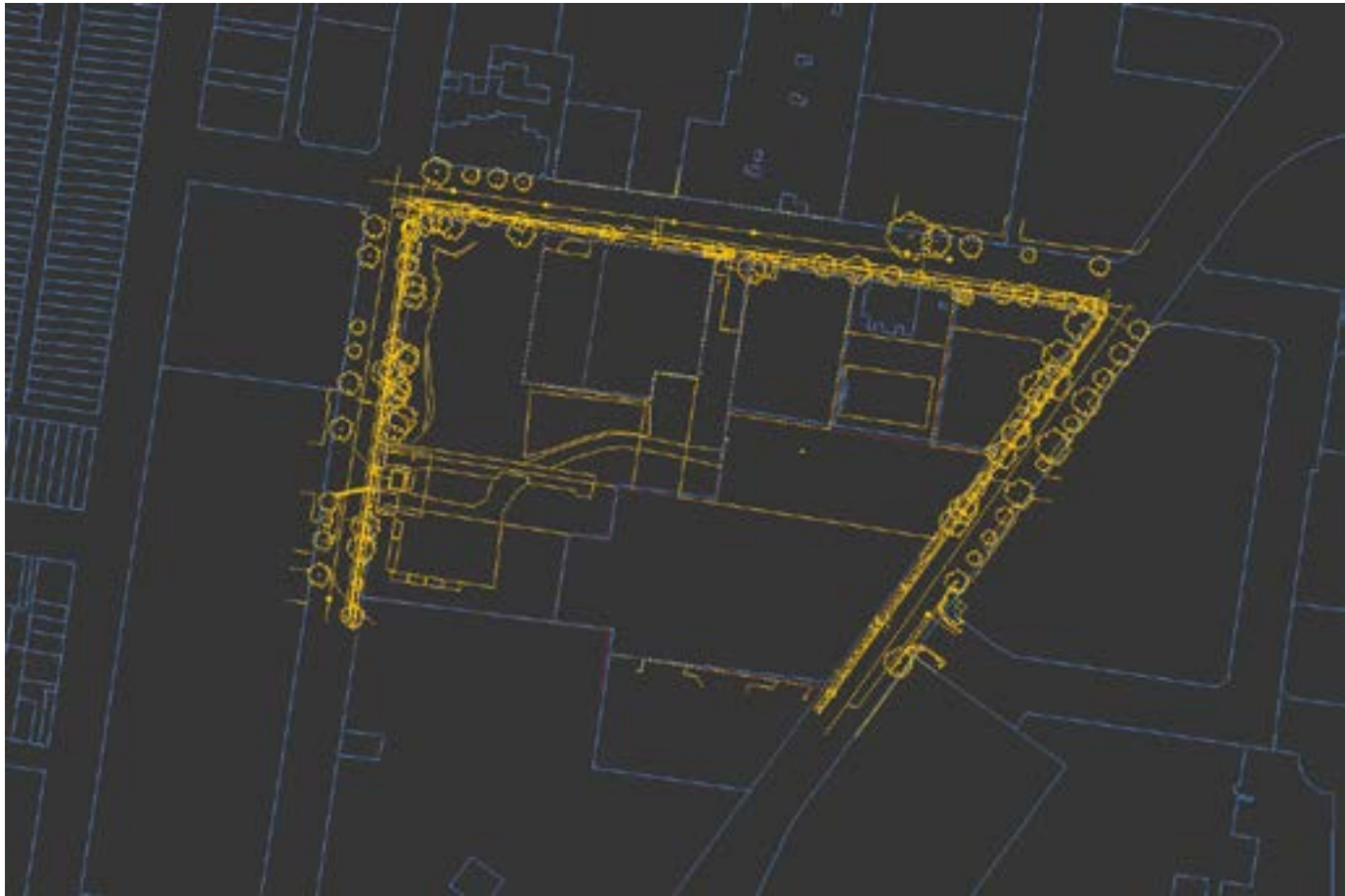


Image showing survey drawing (supplied by SDG Ptd Ltd at MGA 56 GDA2020).

3.4 RENDERING CREATION

Following the completion of the camera alignment, we proceeded to integrate lighting into the 3D scene. To replicate natural lighting conditions accurately, a digital sunlight system was incorporated into the 3D environment. This system emulates the directional lighting of the sun leveraging location data, as well as time and date information. Implemented through specialised software, the sunlight system ensures precise alignment with the sun’s angle, enhancing realism within the scene.

For rendering, we applied specific basic materials to different elements within the scene. The proposed building model was rendered with a basic chalk white material, with the approved envelope shown as a dashed orange line. Neighbouring developments currently under construction were shown in dark grey. This differentiation aids in visual clarity and enhances the presentation of the design elements.

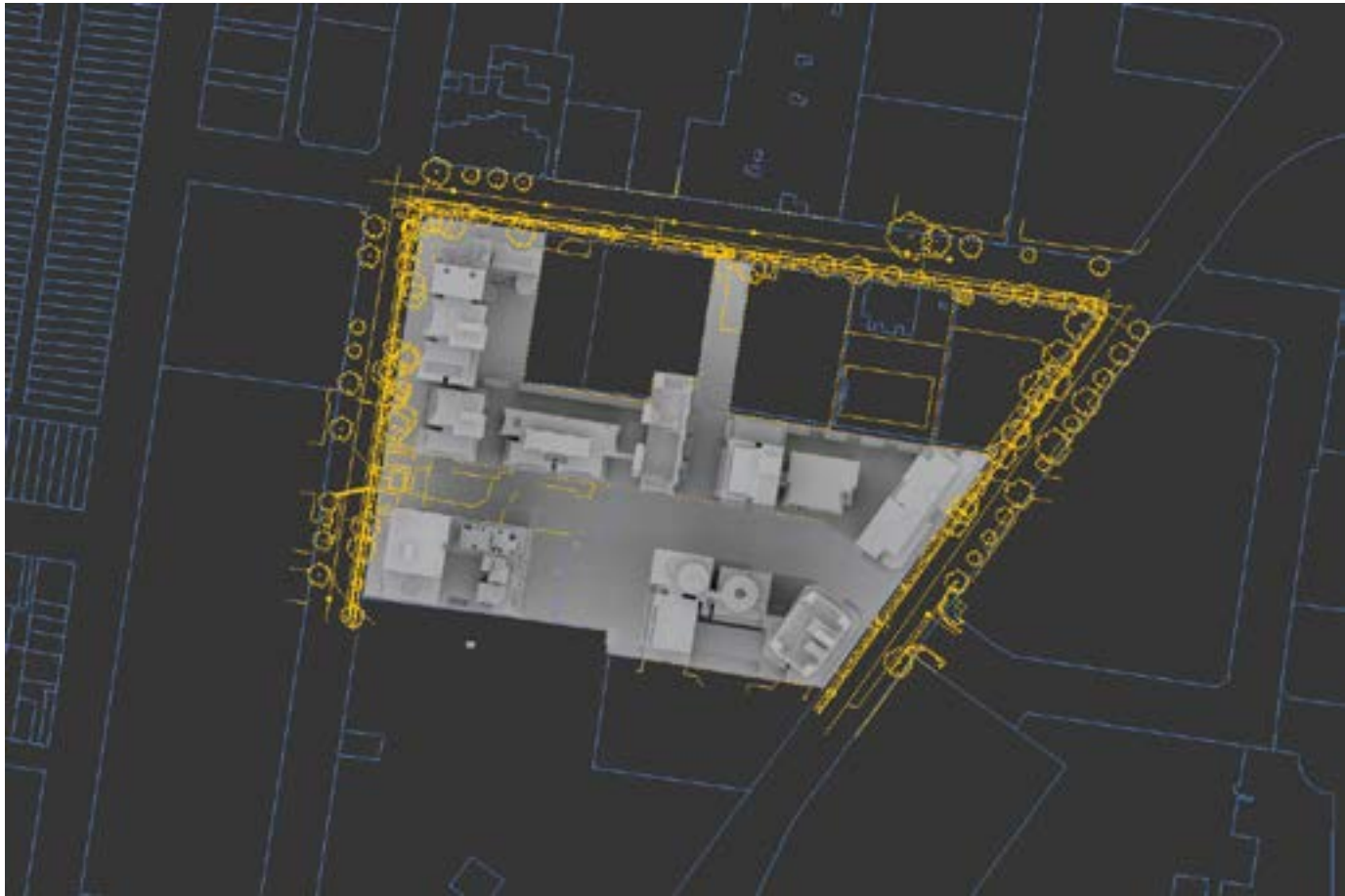
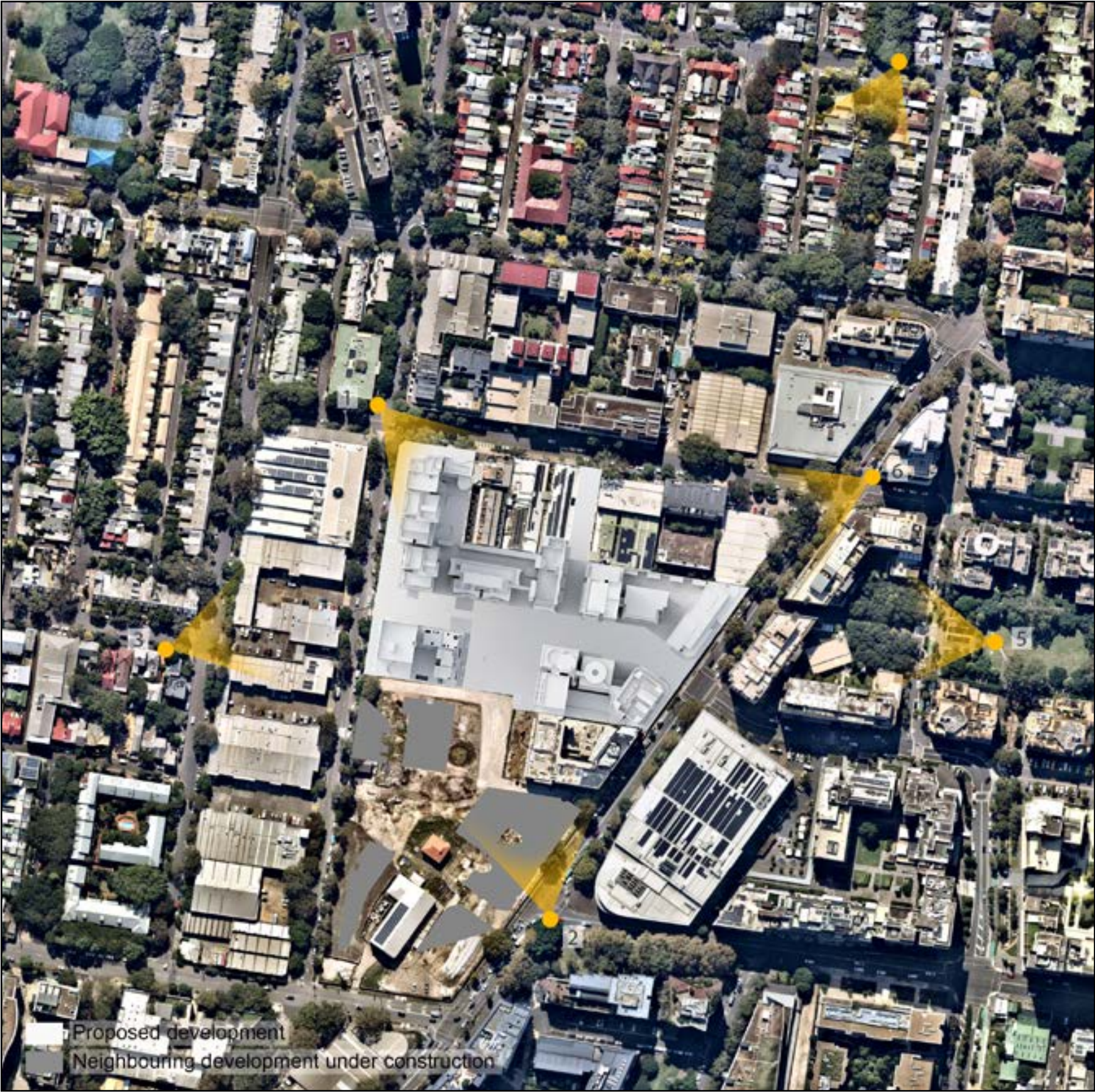


Image showing survey drawing (supplied by SDG Ptd Ltd at MGA 56 GDA2020) with the proposed building model (supplied by Bates Smart) aligned to the site boundary.

4. VIEWPOINTS

MAP ILLUSTRATING VIEWPOINT LOCATIONS



Viewpoint 01. Corner of Young and Danks Street

Viewpoint 02. Bourke Street

Viewpoint 03. Wellington Street

Viewpoint 04. Corner of Zamia and Kepos Street

Viewpoint 05. Crown Park

Viewpoint 06. Corner of Bourke and Danks Street

5.1 VIEWPOINT POSITION 01 - Corner of Young and Danks Street

VIEWPOINT LOCATION



ALIGNMENT OF SURVEYED POINTS



PHOTOGRAPH DETAILS

File Name: View 1A_24mm_02-Enhanced-NR
Author: Virtual Ideas
Format: DNG
Date: 19 May 2025
Time: 16:03 AEST
Lens: 24-105mm f/0
Model: Canon EOS 5DS R
Sensor: Full frame
Focal length: 24mm

ORIGINAL PHOTOGRAPH



NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



5.2 VIEWPOINT POSITION 01 - Corner of Young and Danks Street

PROPOSED DEVELOPMENT

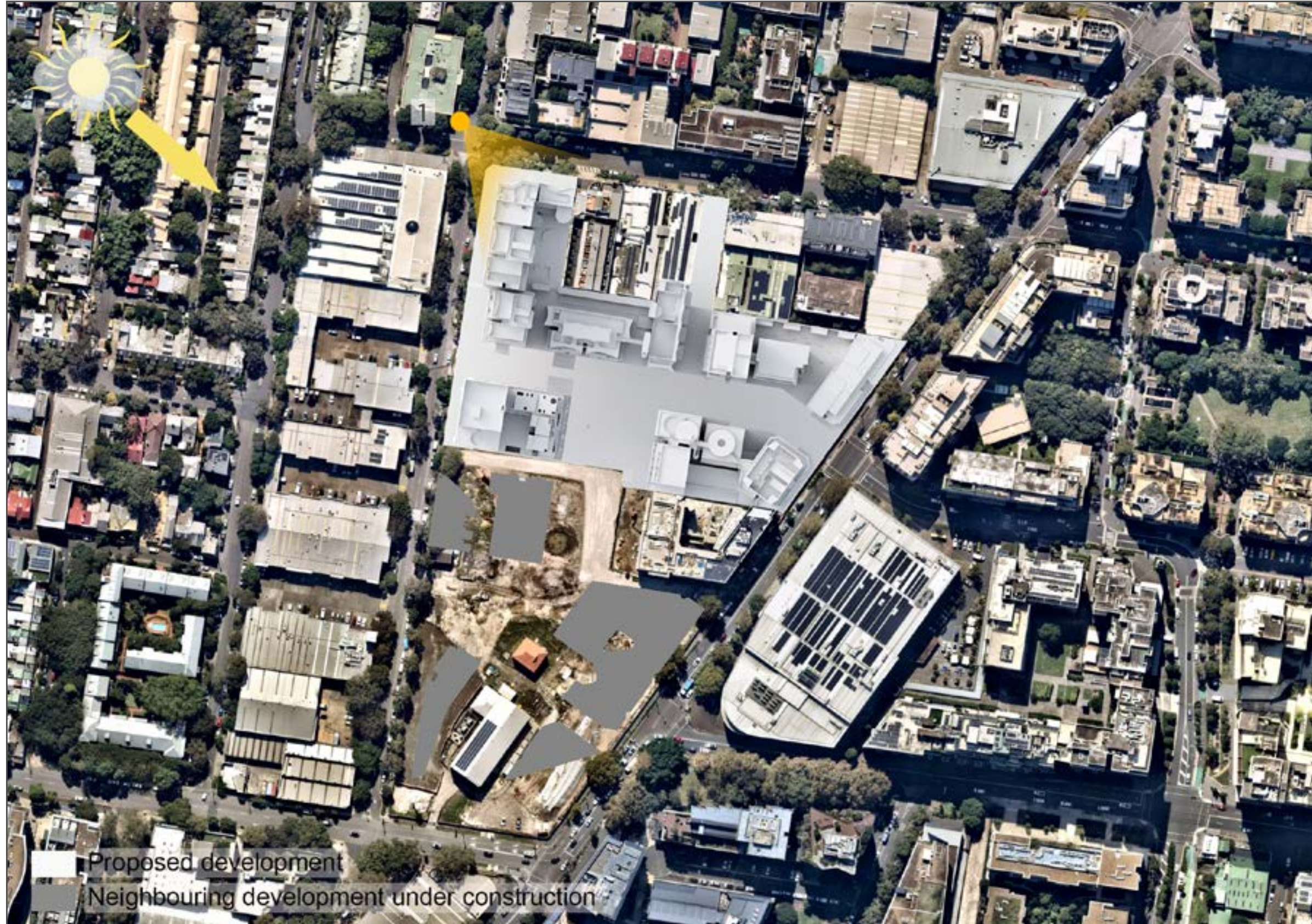


PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



5.3 VIEWPOINT POSITION 01 - Corner of Young and Danks Street

VIEWPOINT LOCATION



5.4 VIEWPOINT POSITION 01 - Corner of Young and Danks Street

ALIGNMENT OF SURVEYED POINTS



5.5 VIEWPOINT POSITION 01 - Corner of Young and Danks Street

ORIGINAL PHOTOGRAPH



5.6 VIEWPOINT POSITION 01 - Corner of Young and Danks Street

NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



5.7 VIEWPOINT POSITION 01 - Corner of Young and Danks Street

PROPOSED DEVELOPMENT



5.8 VIEWPOINT POSITION 01 - Corner of Young and Danks Street

PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



6.1 VIEWPOINT POSITION 02 - Bourke Street

VIEWPOINT LOCATION



ALIGNMENT OF SURVEYED POINTS



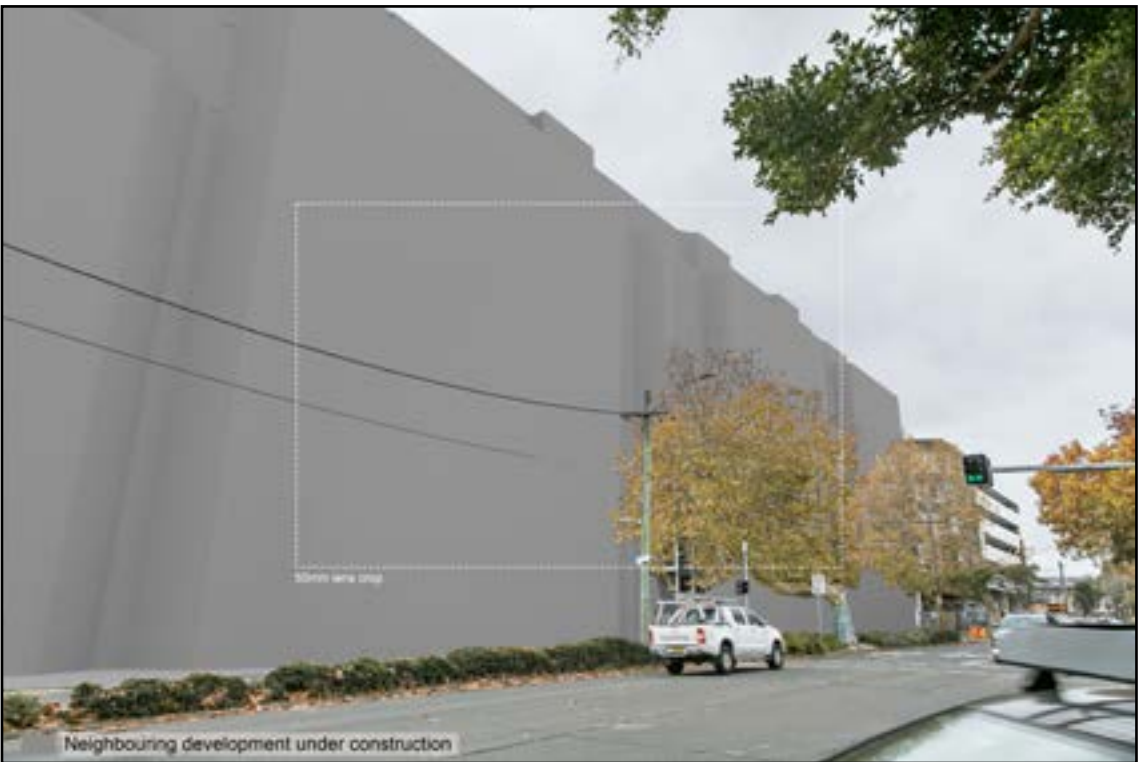
PHOTOGRAPH DETAILS

File Name:	View 2D_24mm_05-Enhanced-NR
Author:	Virtual Ideas
Format:	DNG
Date:	19 May 2025
Time:	15:42 AEST
Lens:	24-105mm f/0
Model:	Canon EOS 5DS R
Sensor:	Full frame
Focal length:	24mm

ORIGINAL PHOTOGRAPH

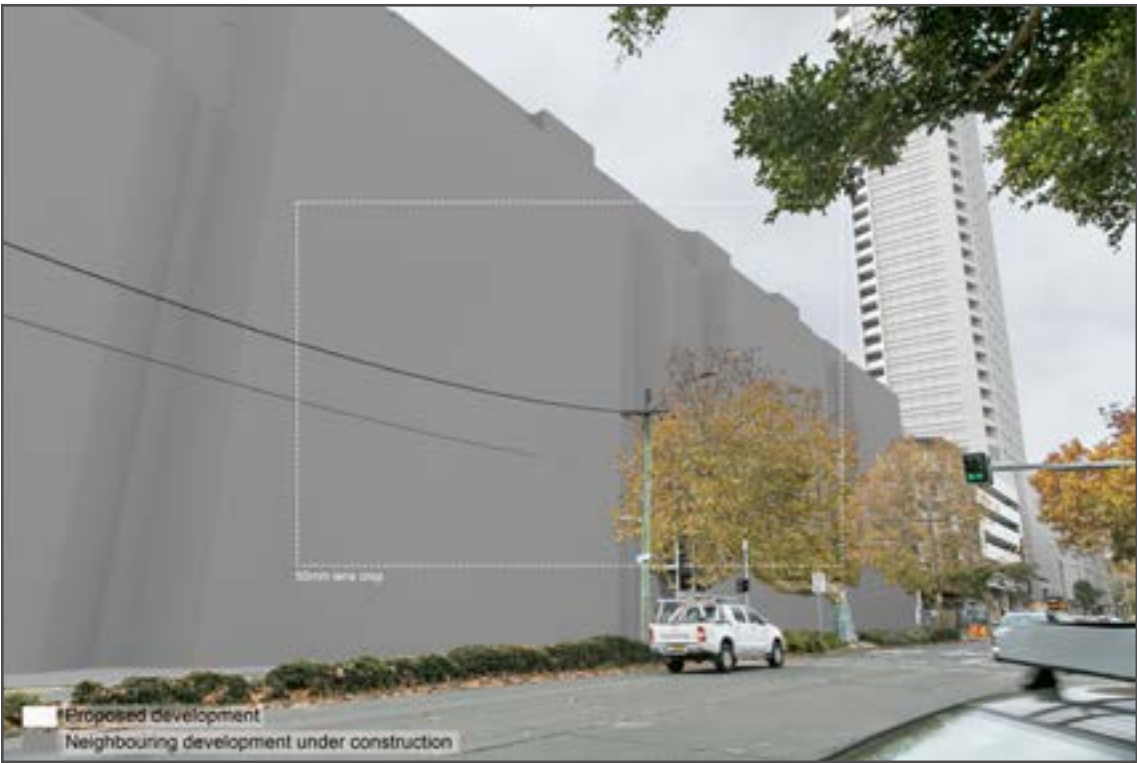


NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



6.2 VIEWPOINT POSITION 02 - Bourke Street

PROPOSED DEVELOPMENT



PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



6.3 VIEWPOINT POSITION 02 - Bourke Street

VIEWPOINT LOCATION



6.4 VIEWPOINT POSITION 02 - Bourke Street

ALIGNMENT OF SURVEYED POINTS



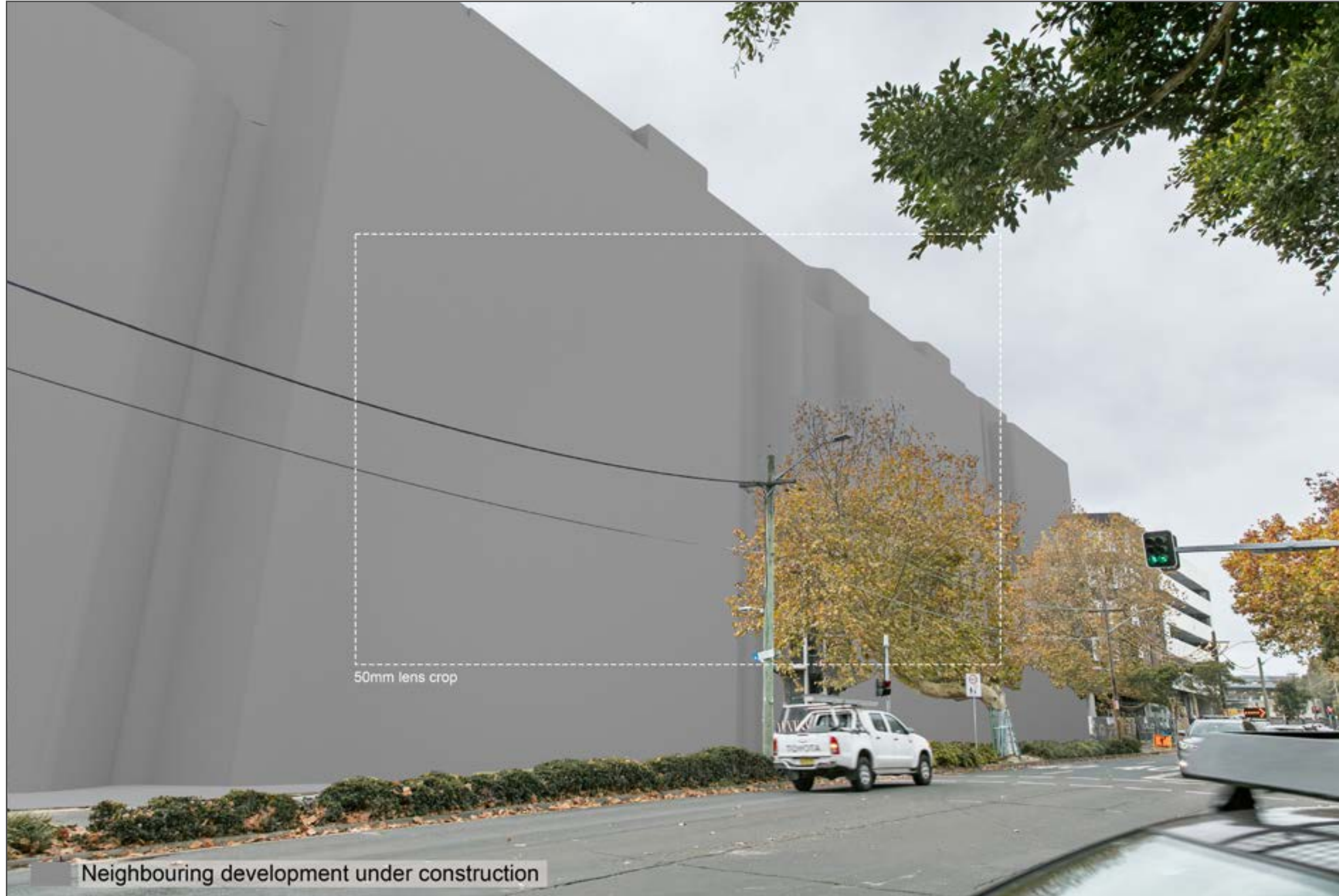
6.5 VIEWPOINT POSITION 02 - Bourke Street

ORIGINAL PHOTOGRAPH



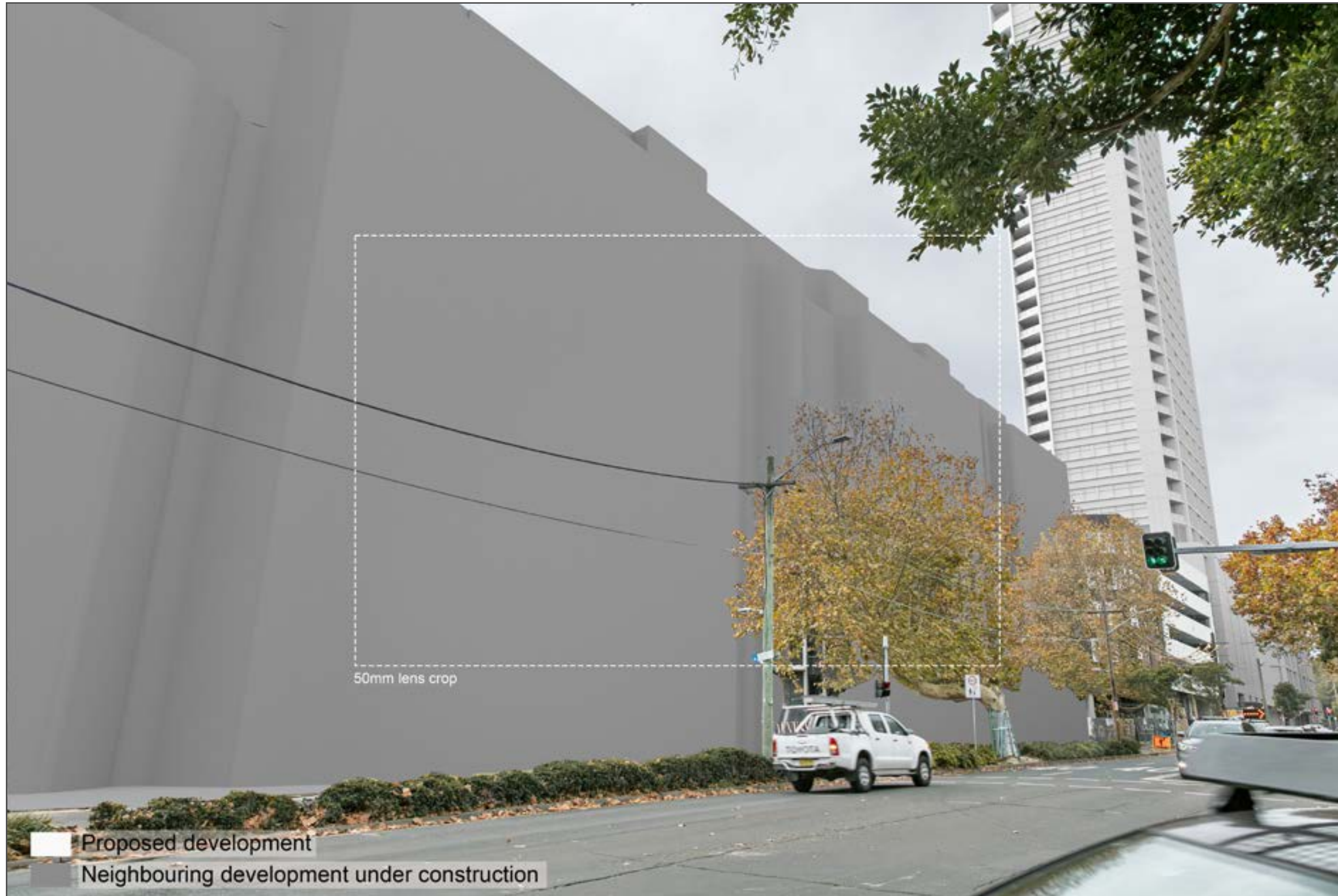
6.6 VIEWPOINT POSITION 02 - Bourke Street

NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



6.7 VIEWPOINT POSITION 02 - Bourke Street

PROPOSED DEVELOPMENT



6.8 VIEWPOINT POSITION 02 - Bourke Street

PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



7.1 VIEWPOINT POSITION 03 - Wellington Street

VIEWPOINT LOCATION



ALIGNMENT OF SURVEYED POINTS



PHOTOGRAPH DETAILS

File Name: View 3A_24mm_02-Enhanced-NR
Author: Virtual Ideas
Format: DNG
Date: 19 May 2025
Time: 15:53 AEST
Lens: 24-105mm f/0
Model: Canon EOS 5DS R
Sensor: Full frame
Focal length: 24mm

ORIGINAL PHOTOGRAPH



NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



7.2 VIEWPOINT POSITION 03 - Wellington Street

PROPOSED DEVELOPMENT

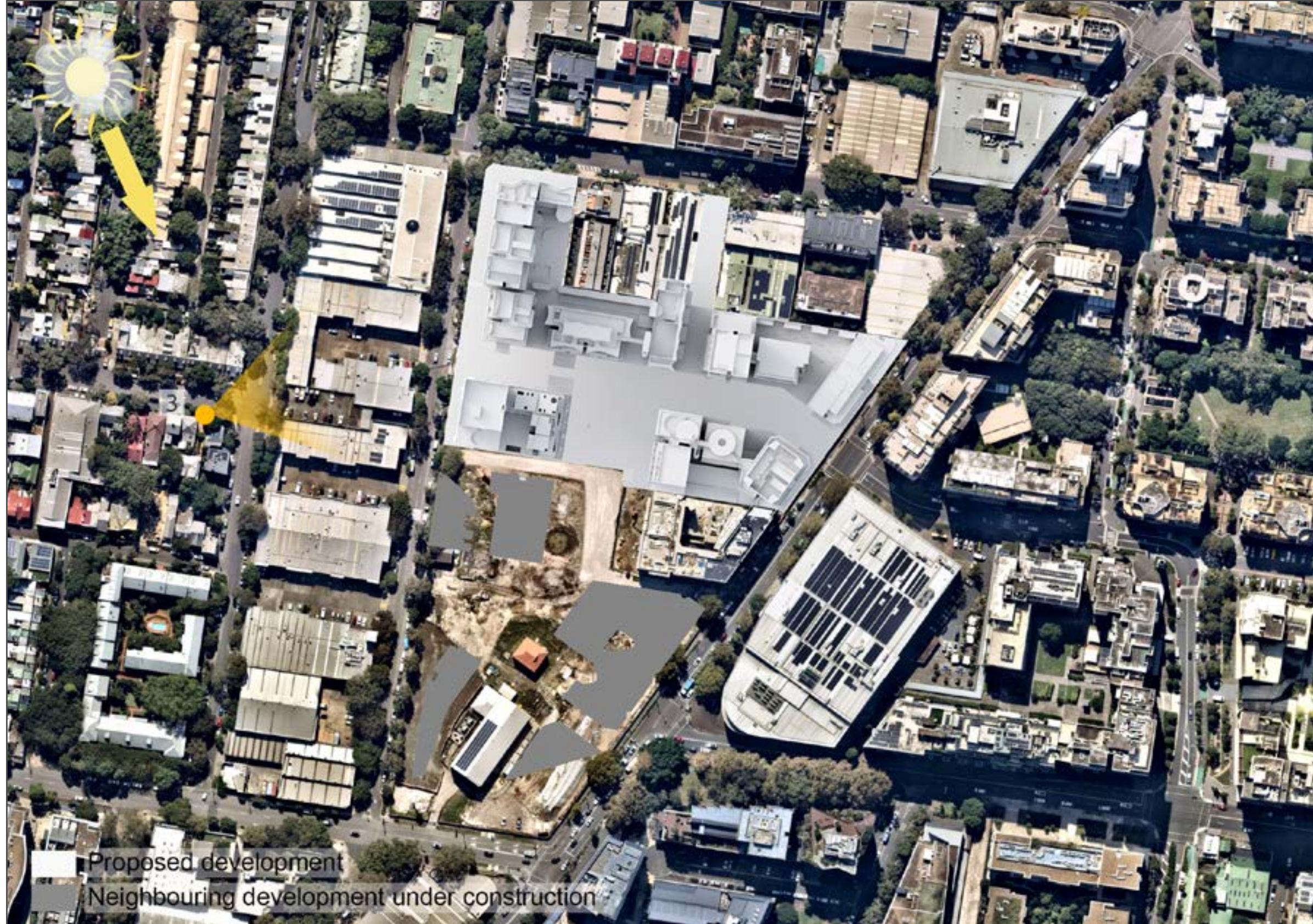


PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



7.3 VIEWPOINT POSITION 03 - Wellington Street

VIEWPOINT LOCATION



7.4 VIEWPOINT POSITION 03 - Wellington Street

ALIGNMENT OF SURVEYED POINTS



7.5 VIEWPOINT POSITION 03 - Wellington Street

ORIGINAL PHOTOGRAPH



7.6 VIEWPOINT POSITION 03 - Wellington Street

NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



7.7 VIEWPOINT POSITION 03 - Wellington Street

PROPOSED DEVELOPMENT



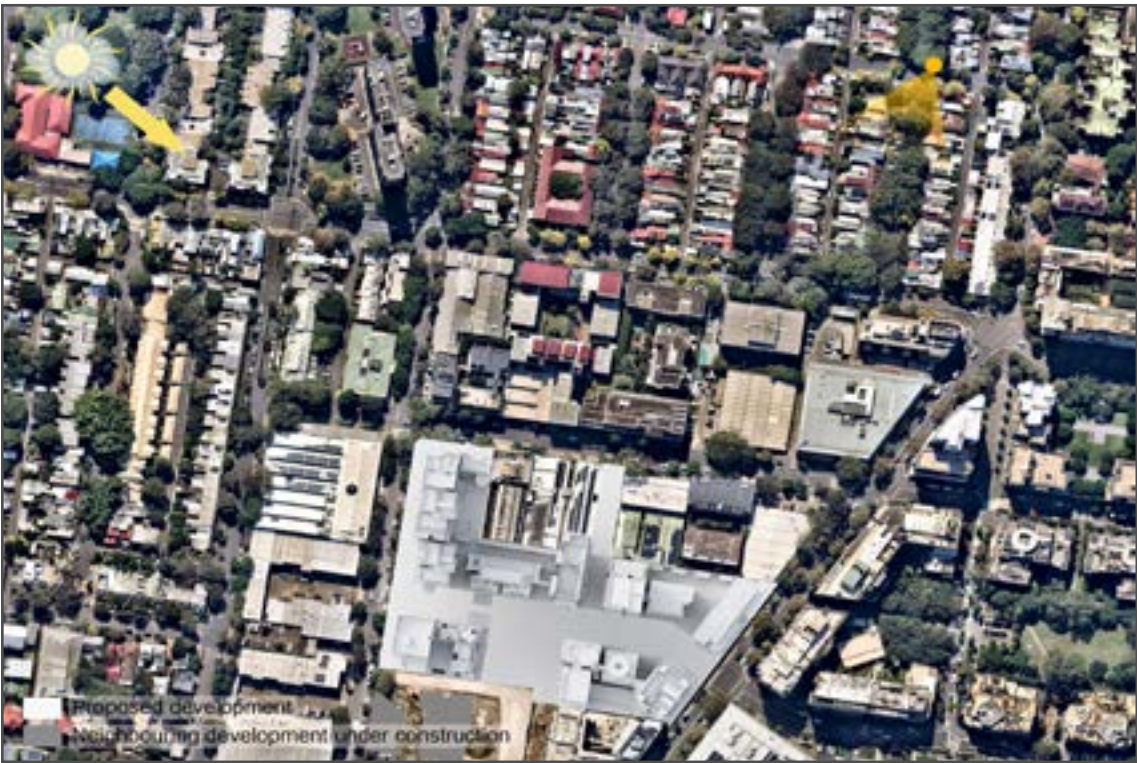
7.8 VIEWPOINT POSITION 03 - Wellington Street

PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



8.1 VIEWPOINT POSITION 04 - Corner of Zamia and Kepos Street

VIEWPOINT LOCATION



ALIGNMENT OF SURVEYED POINTS



PHOTOGRAPH DETAILS

File Name: View 4B_24mm_01-Enhanced-NR
Author: Virtual Ideas
Format: DNG
Date: 19 May 2025
Time: 14:57 AEST
Lens: 24-105mm f/0
Model: Canon EOS 5DS R
Sensor: Full frame
Focal length: 24mm

ORIGINAL PHOTOGRAPH



NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



8.2 VIEWPOINT POSITION 04 - Corner of Zamia and Kepos Street

PROPOSED DEVELOPMENT

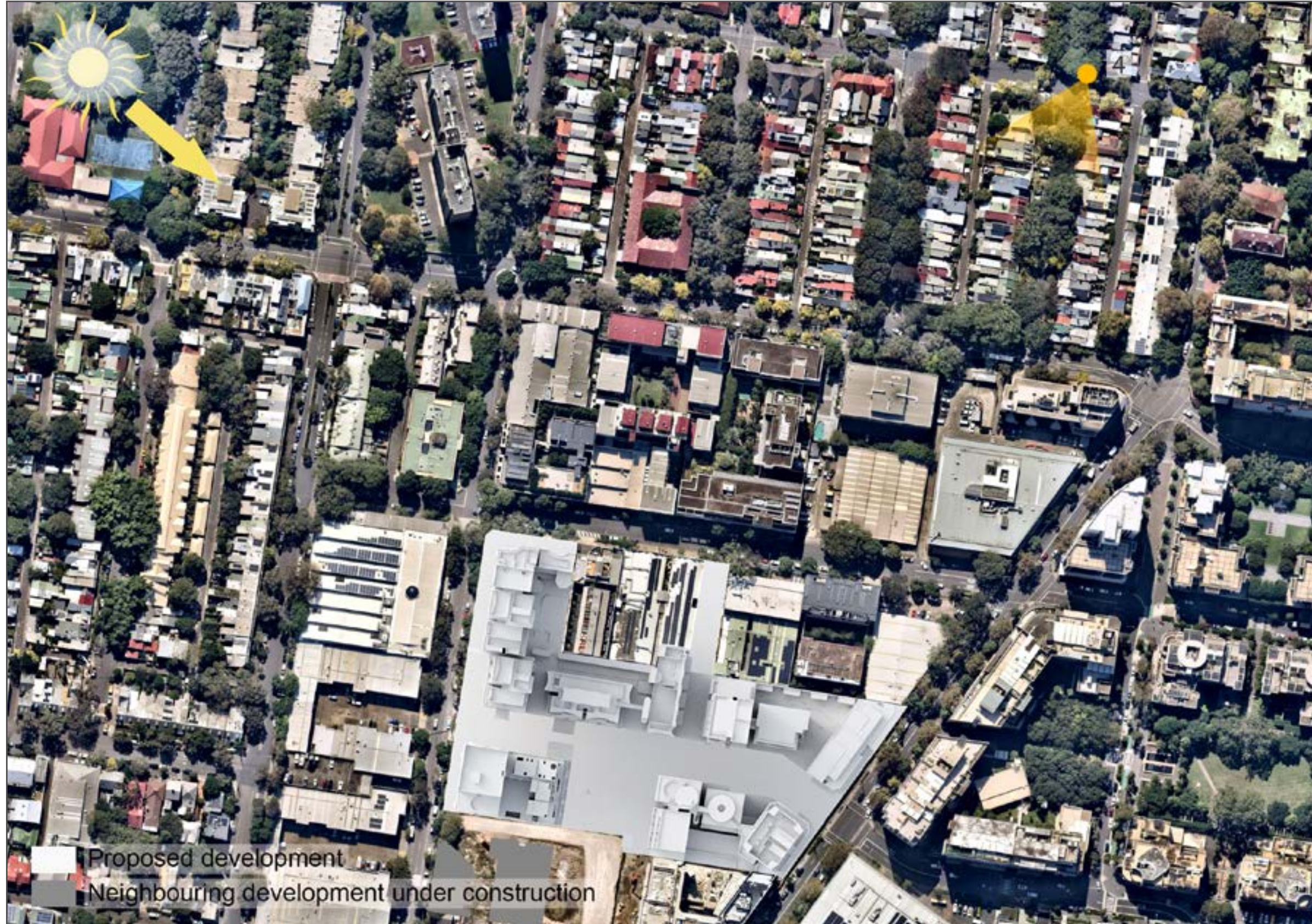


PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



8.3 VIEWPOINT POSITION 04 - Corner of Zamia and Kepos Street

VIEWPOINT LOCATION



8.4 VIEWPOINT POSITION 04 - Corner of Zamia and Kepos Street

ALIGNMENT OF SURVEYED POINTS



8.5 VIEWPOINT POSITION 04 - Corner of Zamia and Kepos Street

ORIGINAL PHOTOGRAPH



8.6 VIEWPOINT POSITION 04 - Corner of Zamia and Kepos Street

NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



8.7 VIEWPOINT POSITION 04 - Corner of Zamia and Kepos Street

PROPOSED DEVELOPMENT



8.8 VIEWPOINT POSITION 04 - Corner of Zamia and Kepos Street

PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



9.1 VIEWPOINT POSITION 05 - Crown Park

VIEWPOINT LOCATION



ALIGNMENT OF SURVEYED POINTS



PHOTOGRAPH DETAILS

File Name: View 5A_24mm_02-Enhanced-NR
Author: Virtual Ideas
Format: DNG
Date: 19 May 2025
Time: 15:18 AEST
Lens: 24-105mm f/0
Model: Canon EOS 5DS R
Sensor: Full frame
Focal length: 24mm

ORIGINAL PHOTOGRAPH



NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



9.2 VIEWPOINT POSITION 05 - Crown Park

PROPOSED DEVELOPMENT

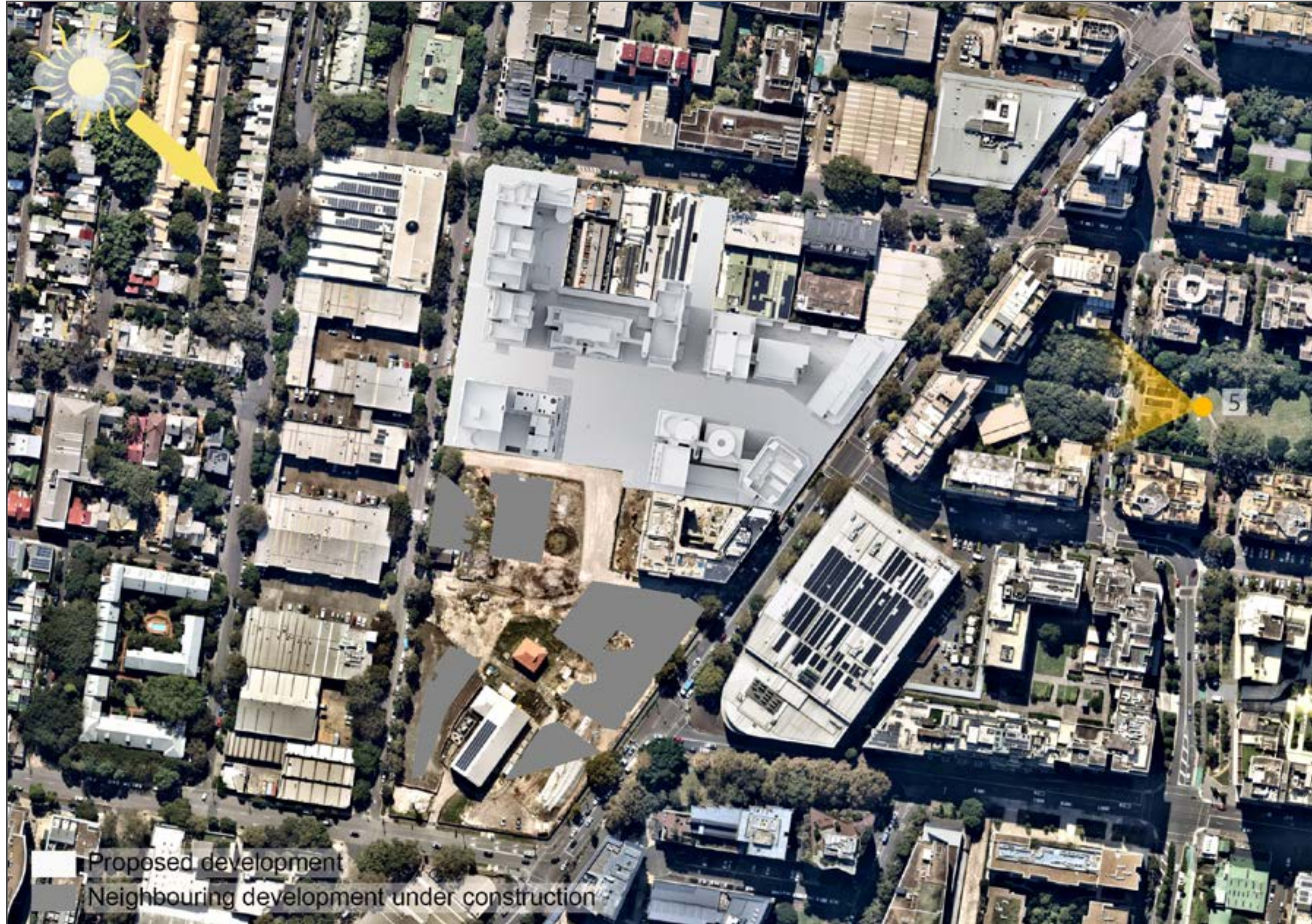


PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



9.3 VIEWPOINT POSITION 05 - Crown Park

VIEWPOINT LOCATION



9.4 VIEWPOINT POSITION 05 - Crown Park

ALIGNMENT OF SURVEYED POINTS



9.5 VIEWPOINT POSITION 05 - Crown Park

ORIGINAL PHOTOGRAPH



9.6 VIEWPOINT POSITION 05 - Crown Park

NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



9.7 VIEWPOINT POSITION 05 - Crown Park

PROPOSED DEVELOPMENT



9.8 VIEWPOINT POSITION 05 - Crown Park

PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



10.1 VIEWPOINT POSITION 06 - Corner of Bourke and Danks Street

VIEWPOINT LOCATION



ALIGNMENT OF SURVEYED POINTS



PHOTOGRAPH DETAILS

File Name: View 6B_24mm-Enhanced-NR
Author: Virtual Ideas
Format: DNG
Date: 19 May 2025
Time: 15:11 AEST
Lens: 24-105mm f/0
Model: Canon EOS 5DS R
Sensor: Full frame
Focal length: 24mm

ORIGINAL PHOTOGRAPH



NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



10.2 VIEWPOINT POSITION 06 - Corner of Bourke and Danks Street

PROPOSED DEVELOPMENT

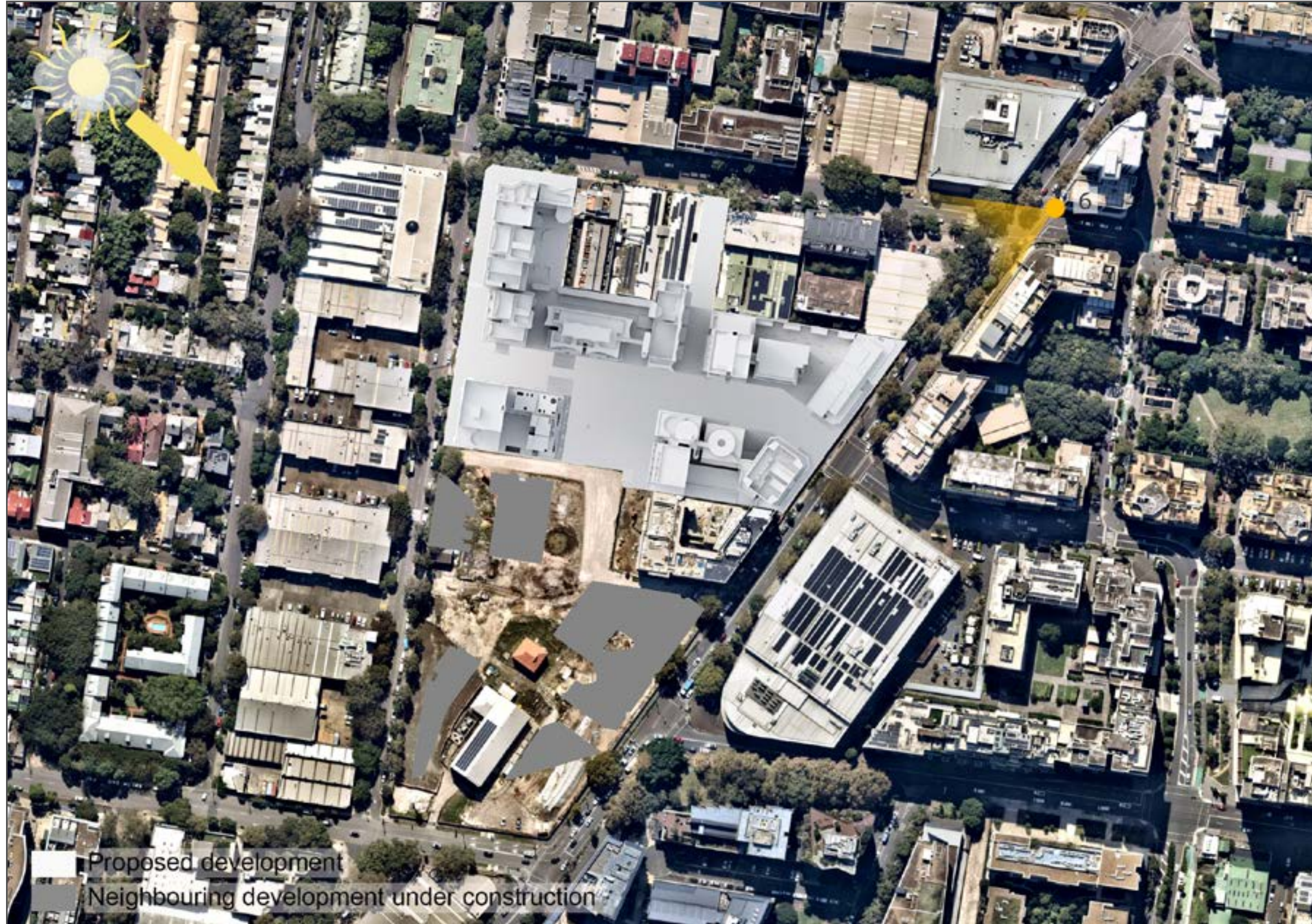


PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



10.3 VIEWPOINT POSITION 06 - Corner of Bourke and Danks Street

VIEWPOINT LOCATION



10.4 VIEWPOINT POSITION 06 - Corner of Bourke and Danks Street

ALIGNMENT OF SURVEYED POINTS



10.6 VIEWPOINT POSITION 06 - Corner of Bourke and Danks Street

ORIGINAL PHOTOGRAPH



10.1 VIEWPOINT POSITION 06 - Corner of Bourke and Danks Street

NEIGHBOURING DEVELOPMENT UNDER CONSTRUCTION



10.7 VIEWPOINT POSITION 06 - Corner of Bourke and Danks Street

PROPOSED DEVELOPMENT



10.8 VIEWPOINT POSITION 06 - Corner of Bourke and Danks Street

PROPOSED DEVELOPMENT WITH APPROVED ENVELOPE



11.1 3D SCENE DATA SOURCES

1a - 3D Model of the proposed building - refer to Appendix A

File Name: 250825_Precinct Model
Author: Bates Smart
Format: FBX
Alignment: Aligned to MGA 56 GDA2020 via Appendix C

1b - 3D Model of the approved envelope - refer to Appendix A

File Name: 250825_Approved Envelope
Author: Bates Smart
Format: FBX
Alignment: Aligned to MGA 56 GDA2020 via Appendix C

2 - Site Survey - refer to Appendix B for details

File Name: 24439 Photolocations 1
Author: CMS Surveyors
Format: Autocad DWG
Alignment: MGA 56 GDA2020

3 - Existing Site Survey - refer to Appendix C for details

File Name: 9350 - 207 Young Street & 893 Bourke Street Waterloo - Detail & Level - Rev B_client
Author: SDG Ptd Ltd
Format: Autocad DWG
Alignment: MGA 56 GDA2020

11.2 APPENDIX A: 3D MODELS SUPPLIED BY BATES SMART

OVERVIEW



11.3 APPENDIX B: SITE SURVEY SUPPLIED BY CMS

CMS Surveyors Pty Limited

A.B.N. 79 096 240 201
LAND SURVEYING, PLANNING & DEVELOPMENT CONSULTANTS



Page 1 of 2

Date: 27-05-2025

Our Ref: 24439 Photo Locations

Studio 71/81 Marlborough Street
Surry Hills
NSW 2010

Dear Rick Mansfield,

RE: PHOTO LOCATIONS – 207 Young street, Waterloo 2017

As requested, we attended site and measured the co-ordinates and elevations of the photo locations for 207 Young street, Waterloo 2017.

Co-ordinates are MGA 56 (GDA 2020) and elevation to Australian Height datum (AHD).

Measurements were taken using Leica total station. MGA coordinates and AHD are derived from SSM 16650, SSM 53803, SSM 91689, SSM 118723 & PM 46923.

DWG of locations has also been supplied.

Point Number	Easting	Northing	Reduced Level (RL)	Photo Point
1	334425.879	6247771.918	27.95	PHOTO 1
2	334523.399	6247456.891	26.60	PHOTO 2
3	334278.768	6247628.350	36.34	PHOTO 3
4	334740.402	6247983.570	29.98	PHOTO 4
5	334801.431	6247631.162	33.27	PHOTO 5
6	334725.459	6247731.275	33.31	PHOTO 6
100	334335.393	6247636.301	36.17	Fence
101	334334.629	6247630.173	36.24	Fence
102	334286.537	6247626.486	37.79	Top of wall
103	334282.383	6247629.595	37.51	Post
104	334307.172	6247645.770	37.38	Top of gutter
105	334503.359	6247742.739	41.62	Building
106	334485.756	6247739.128	41.61	Building
107	334442.662	6247756.408	30.54	Post
108	334437.913	6247754.462	31.30	Sign
109	334440.369	6247748.846	30.35	Fence
110	334716.064	6247714.671	37.47	Traffic light
111	334708.138	6247711.332	37.56	Traffic light
112	334689.683	6247719.756	37.18	Traffic light



Page 2 of 2

Point Number	Easting	Northing	Reduced Level (RL)	Photo Point
113	334693.340	6247717.455	40.88	Light pole
114	334665.990	6247722.341	41.39	Light pole
115	334784.969	6247628.600	33.25	Top of wall
116	334770.759	6247631.082	33.25	Top of wall
117	334772.173	6247640.250	33.25	Top of wall
118	334758.980	6247641.048	36.24	Post
119	334752.462	6247644.244	35.41	Post
120	334514.819	6247548.230	48.13	Building
121	334525.111	6247482.812	35.86	Light pole
122	334529.308	6247489.226	31.42	Traffic light
123	334564.060	6247536.487	37.05	Light pole
124	334578.764	6247557.236	36.91	Light pole
125	334740.937	6247957.437	37.28	Roof ridge
126	334741.092	6247968.330	32.75	Post
127	334710.108	6247936.731	37.36	Roof ridge
128	334719.368	6247966.641	31.18	Top of wall
129	334723.107	6247966.201	32.30	Sign
130	334713.676	6247943.937	35.59	Roof
131	334715.260	6247949.814	34.00	Parapet

Note: R.L. shown on the report for photo locations are ground levels. Camera height should be added to the supplied RL of each corresponding photo location.

Yours faithfully,

CMS Surveyors Pty Limited

Hyeokseong Son,

Bachelor of Spatial Science (Honours) with major in Surveying



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Email: coota@cmsurveyors.com.au

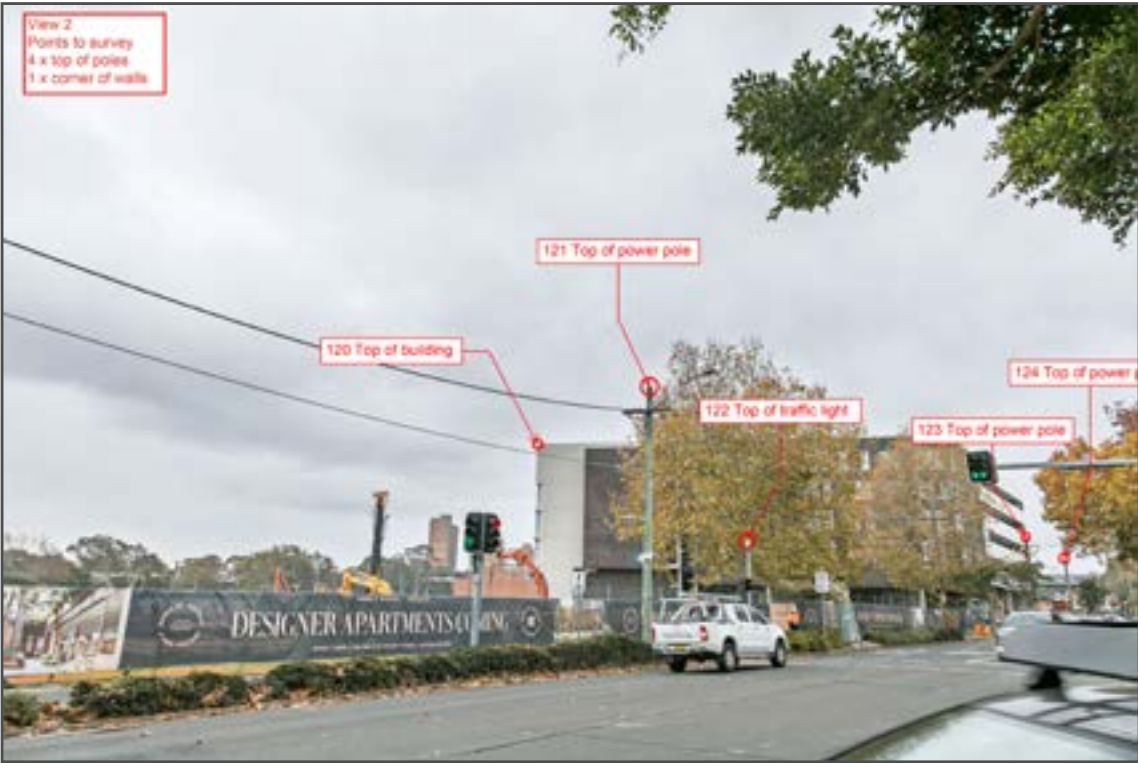


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Email: coota@cmsurveyors.com.au



11.4 APPENDIX B: SITE SURVEY SUPPLIED BY CMS



11.5 APPENDIX B: SITE SURVEY SUPPLIED BY CMS



207 Young Street, Waterloo, NSW - Visual impact photomontage and methodology report - 2nd September 2025

