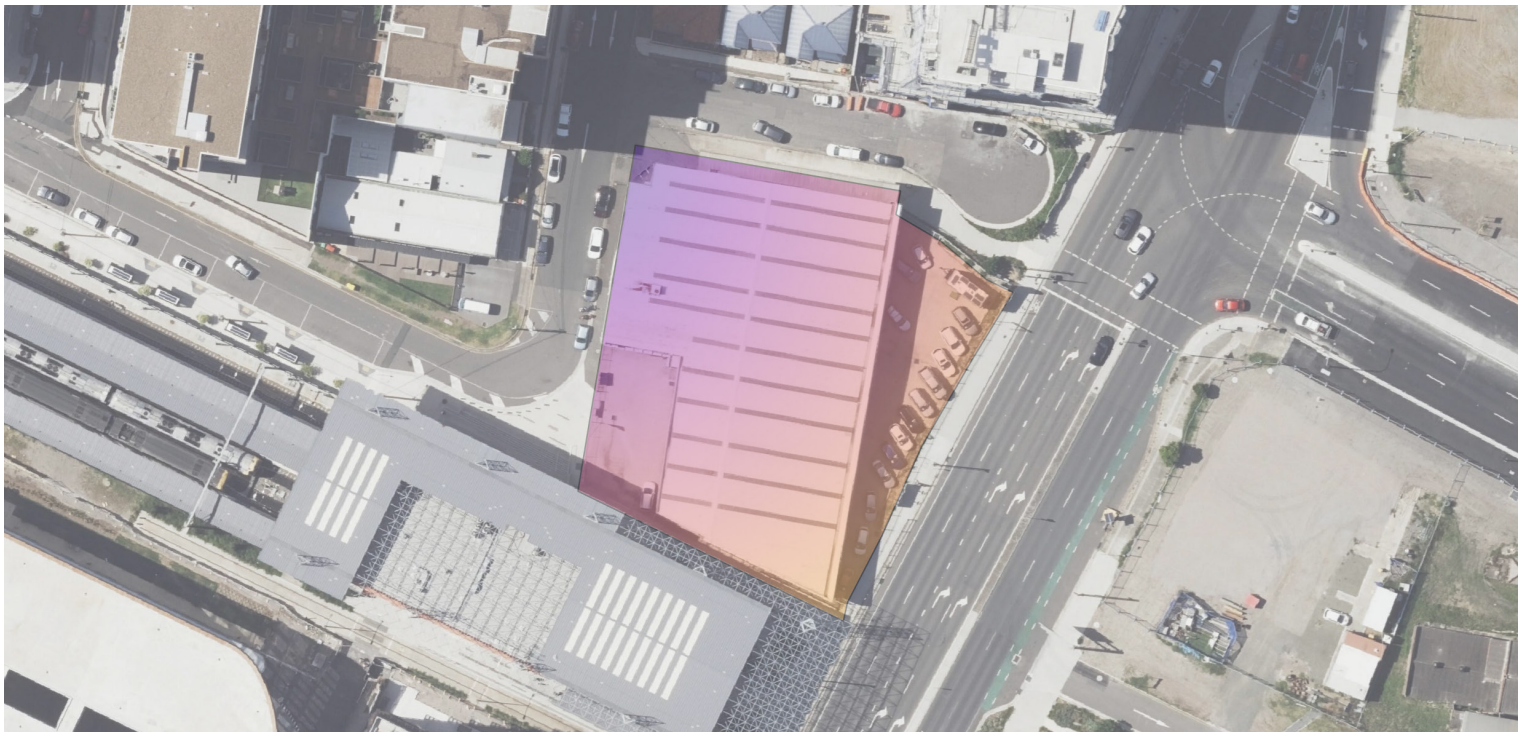
Urbaine Design Group Pty Ltd, 19c/74 , The Corso, Manly, NSW 2095

urbaine
DESIGN GROUP

VISUAL IMPACT ASSESSMENT



10 DANGAR STREET, WICKHAM

SSDA AND CONCURRENT REZONING – MIXED USE DEVELOPMENT

APRIL 2026

Project Type: SSDA and Concurrent Rezoning – Mixed Use Development
Lot: 1/-/DP1197377
Address: 10 Dangar Street, Wickham 2293

CONTENTS

1. INTRODUCTION

1.1. Scope and Purpose of Report

This Visual Impact Report is submitted to the Department of Planning, Housing and Infrastructure (DPHI) on behalf Urban Property Group (UPG) (the Applicant), to support a State Significant Development Application (SSDA) and concurrent Rezoning Report for the construction of a 43-storey mixed-use development at 10 Dangar Street, Wickham (the site). The site is located within the Newcastle local government area (LGA) and occupies a prominent corner position immediately north of the Newcastle Interchange.

The project has been selected by the NSW Housing Delivery Authority (HDA) as a key development to help accelerate the delivery of well-located, diverse and affordable housing in New South Wales. Commencing in early 2025, the HDA plays a coordinating role across government agencies, focusing on unlocking complex sites through strategic planning, infrastructure coordination, and streamlined assessment pathways.

Following the Applicant's expression of interest (EOI 240837), the HDA considered and recommended to the Minister for Planning and Public Spaces (the Minister) that the project be declared SSD under Section 4.36(3) of the Environmental Planning and Assessment Act 1979 (EP&A Act) on 23 June 2025. Following this recommendation, the development was declared by the Minister to be SSD pursuant to the State Significant Development Declaration Order 2025 (No 10), Part 2, Section 1(a), dated 30 June 2025.

Figure 1 – Site location shown in yellow overlay.

1.2. The Project Background

The site was identified under the Wickham Master Plan 2017 as a strategically significant location for increased development capacity, given its proximity to the Newcastle Interchange and its potential to support high-density, mixed-use development. The Master Plan proposed an uplift in planning controls, increasing the permissible building height from 45m to 60m, and the FSR from 5:1 to 6:1, subject to the delivery of public domain improvements, including a 3-metre southern setback adjacent to the transport interchange.

This strategic vision was subsequently reaffirmed in the Wickham Master Plan 2021 Update (PP-2021-1506) and further refined in the 2022 amendment, which supported additional incentive-based planning controls. The Community Infrastructure Incentives in Wickham Planning Proposal (PP-2022/1541), endorsed by Council in March 2022 (and subsequently approved 08 November 2022), proposed:

- An incentive FSR of 7:1 for Area E (the site),
- A maximum incentive building height of 60m, and
- Community infrastructure requirements.

In alignment with these strategies, the site has been subject to successive development consents as outlined in the Environmental Impact Statement (EIS) prepared by Beam Planning. These prior consents have been physically commenced through demolition and excavation works and establish the maximum envelope for basement structures. This SSDA will adopt and refine these commenced elements to expedite the assessment process, continue construction progress on the site, and ensure continuity with previously endorsed planning outcomes.

1.3. The Proposal

1.3.1. Rezoning Proposal

To facilitate the proposed development described in Section 3.2, a concurrent Rezoning Proposal is sought to make the following amendments to the Newcastle Local Environmental Plan 2012 (Newcastle LEP 2012) in relation to the site:

- Amend Clause 7.9 to permit a maximum building height of 152m on the site; and,
- Amend the Clause 7.9A to permit a maximum FSR of 14.4:1 on the site.

Figure 2 – Subject site shown in yellow overlay.

1.3.2. State Significant Development Application

The proposed amendments to the Newcastle LEP 2012, as outlined above, will facilitate the following development, proposed via a concurrent SSDA. Specifically, the proposed works sought under the SSDA include:

- Construction of a 43-storey (+ plant) mixed-use tower, comprising:
- 245 residential apartments
- 95 co-living units
- Ground floor retail premises, to all three street frontages
- A hotel component within the podium
- Basement car parking
- Associated landscaping and public domain improvements, including the provision of a pedestrian through-site link that runs east/west adjacent to the Newcastle Interchange.

It is noted that the project will commit to providing 15% of the residential GFA as affordable housing for a minimum of 15 years, to be managed by a registered Community Housing Provider (CHP).

The proposed SSDA will seek consent for the use of basement structures and enabling works approved under DA2018/01197 (as modified).

For a detailed description of the proposed development, refer to the EIS prepared by Beam Planning, and the Architectural Drawings prepared by SJB Architecture.

1.4. The Site

The site is located at 10 Dangar Street, Wickham, within the Newcastle LGA. The site benefits from triple street frontages, with a primary street frontage of approximately 64m to Dangar Street, and secondary street frontages of approximately 61m to Hannell Street and 50m to Charles Street.

The surrounding locality comprises a diverse mix of land uses including residential, commercial, and light industrial uses, reflecting the area's ongoing transition. The site's frontage to Hannell Street, a major arterial road, supports high levels of connectivity to the broader metropolitan area. The site is located immediately north of the Newcastle Interchange, providing bus, rail and light rail services. Strategically, the site sits at the intersection of the Newcastle West End, Wickham, and Honeysuckle precincts, positioning it to support the city's transition to a higher-density, mixed use metropolitan centre.

The site is currently vacant following demolition works approved under DA2018/01197 (as modified).

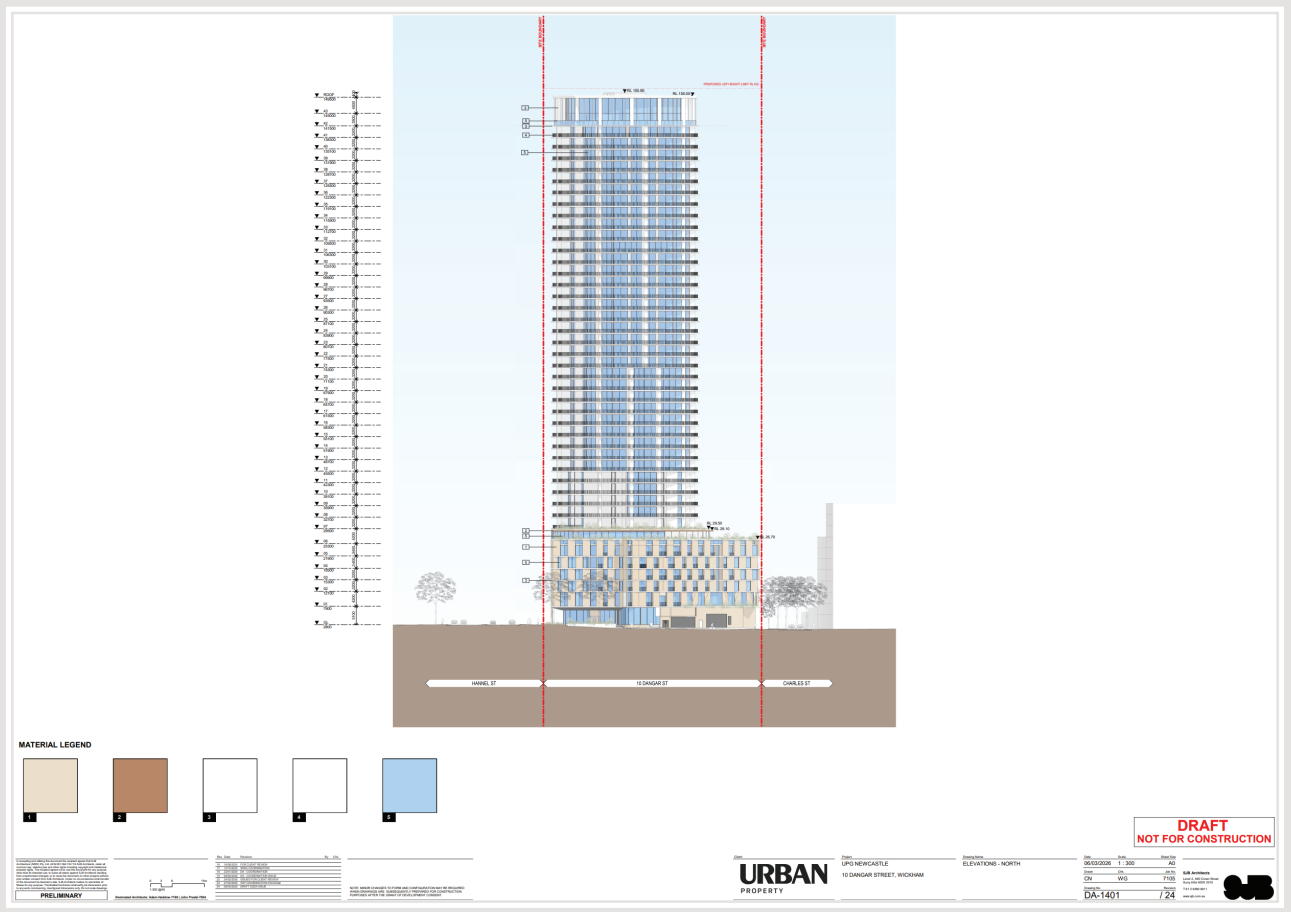


Figure 3 – Elevations of the proposed design by SJB Architects.

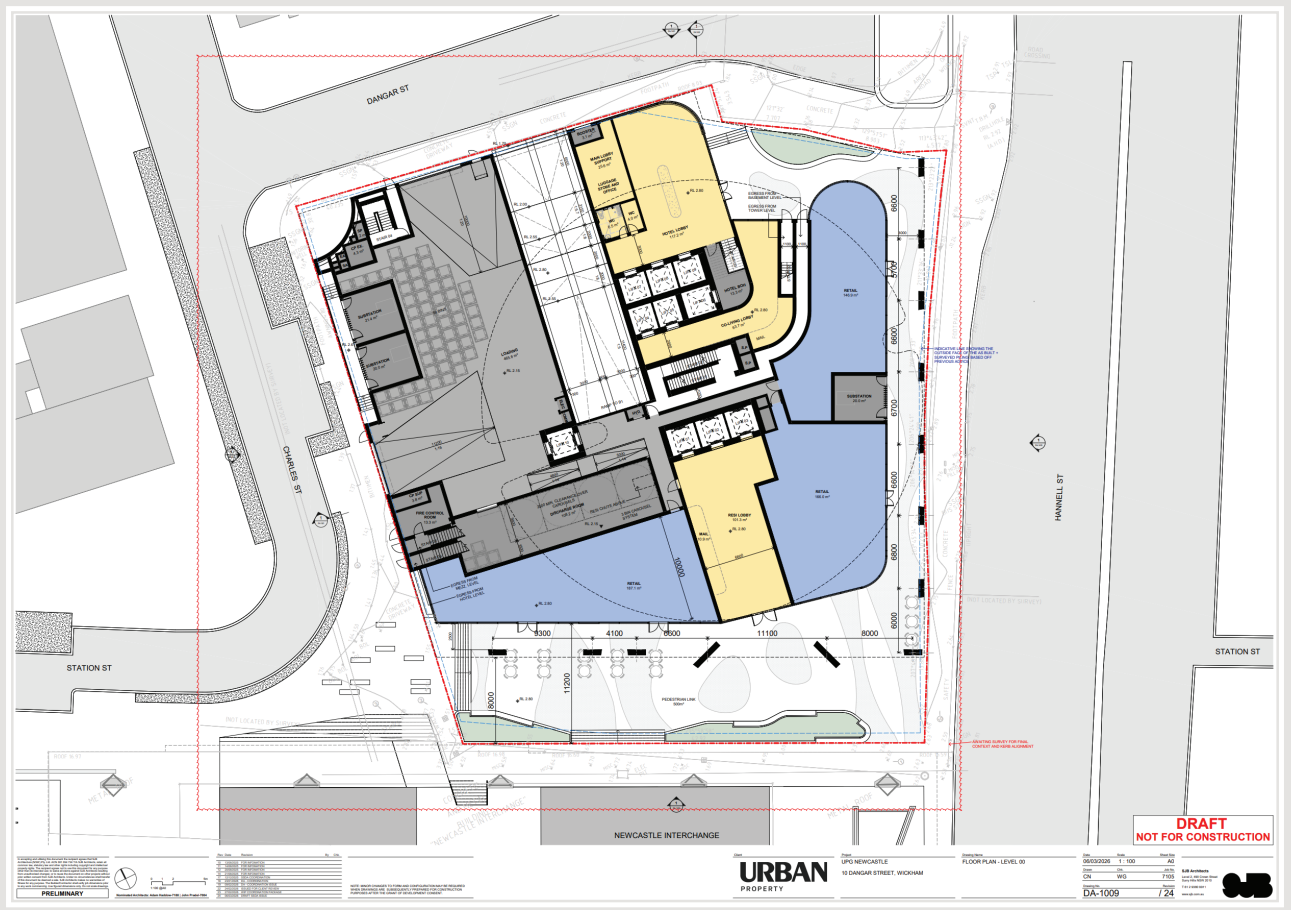


Figure 4 – Typical floor plan of the proposed design by SJB Architects.

1.5. Methodology of Assessment

The methods used by Urbaine, for the generation of photomontaged images, showing the proposed development in photomontaged context are summarised in an article prepared for New Planner magazine in December 2018 and contained in Appendix A. A combination of the methods described were utilised in the preparation of the photomontaged views used in this visual impact assessment report.

1.5.1. Process

Survey, plans, elevations and model of the proposal were sourced from the architect , SJB Architects and aligned to the scene using the survey information from Delfs Lascelles Surveyors, which accompanies the DA submission.

A geolocated 3D point cloud from the Intergovernmental Committee on Surveying and Mapping (ICSM) was verified against aligned ground control points using a RTK GNSS rover with NTRIP corrections. This was placed into the scene and further verified against the survey DWG.

Virtual cameras were placed into the 3D model to match various selected viewpoints, in both height and position. These locations were measured on-site using a survey provided. From these cameras, rendered views have been generated and photomontaged into the existing photos, using the ground plane for alignment at standing height 1600mm.

The final selection of images shows these stages, including the block montage of the original development application and concluding with an outline, indicating the potential visual impact and view loss. For the purposes of statutory requirements, the images within the report are of a standard lens format.

1.5.2. Assessment Methodology

There are no set guidelines within Australia regarding the actual methodology for visual impact assessment, although there are a number of requirements defined by the Land and Environment Court (LEC) relating to the preparation of photomontages upon which an assessment can be based.

Where a proposal is likely to adversely affect views from either private or public land, Council will give consideration to the Land and Environment Court's Planning Principles. For view sharing from private locations Tenacity Consulting v Warringah Council [2004] NSWLEC 140 'planning principle' can be used or Rose Bay Marina Pty Limited v Woollahra Municipal Council & Anr [2013] NSWLEC 1046 'planning principle' for public domain views.

The Tennacity Planning Principle establishes a four-step assessment to assist in deciding whether or not view sharing is reasonable:

- *Step 1: assessment of views to be affected.*
- *Step 2: consider from what part of the property the views are obtained.*
- *Step 3: assess the extent of the impact.*
- *Step 4: assess the reasonableness of the proposal that is causing the impact*

The planning principle for public domain views adopted in Rose Bay Marina involves a two stage inquiry: the first factual, followed by a second, analytical requiring both quantitative as well as qualitative assessment.

However, there is no peer review system for determining the accuracy of the base material used for visual impact assessments. As a result, Urbaine Design Group provides a detailed description of its methodologies and the resultant accuracy verifiability – this is contained within Appendix A.

The methodology applied to the visual assessment of the current design proposal has been developed from consideration of the following key documents:

- *Environmental Impact Assessment Practice Note, Guideline for Landscape Character and Visual Impact Assessment (EIA-N04) NSW RMS (2013);*
- *Visual Landscape Planning in Western Australia, A Manual for Evaluation, Assessment, Siting and Design, Western Australia Planning Commission (2007);*
- *Guidelines for Landscape and Visual Impact Assessment, (Wilson, 2002);*

In order to assess the visual impact of the Design Proposal, it is necessary to identify a suitable scope of publicly accessible locations that may be impacted by it, evaluate the visual sensitivity of the Design Proposal to each location and determine the overall visual impact of the Design Proposal.

Accessible locations that feature a prominent, direct and mostly unobstructed line of sight to the Project are used to assess the visual impact of the Design Proposal. The impact to each location is then assessed by overlaying

an accurate visualisation of the new design onto the base photography and interpreting the amount of view loss in each situation, together with potential opportunities for mitigation.

Views of high visual quality are those featuring a variety of natural environments/ landmark features, long range, distant views and with no, or minimal, disturbance as a result of human development or activity. Views of low visual quality are those featuring highly developed environments and short range, close distance views, with little or no natural features.

Visual sensitivity is evaluated through consideration of distance of the view location to the site boundary and also to proposed buildings on the site within the Design Proposal. Then, as an assessment of how the Design Proposal will impact on the particular viewpoint. Visual sensitivity provides the reference point to the potential visual impact of the Design Proposal to both the public and residents, located within, and near to the viewpoint locations.

Figure 5: Area invetstigated during site visit

1.5.3. Site Inspections

A site inspection was undertaken to photograph the site and surrounding area to investigate:

- *The topography and existing urban structure of the local area*
- *The streetscapes and houses most likely to be affected by the Proposal*
- *Important vistas and viewsheds*
- *Other major influences on local character and amenity*

Figure 6: Selected private or public viewpoint locations for visual impact assessments with site outlined in red.

Where photography was not possible or impracticable in regards to time, resources and likely hood of high value view loss, drone images were taken from the boundary or virtual views were used. The map, see figure 6, indicates chosen locations for site photography.

Virtual analysis was also undertaken to asses the potential for high value view loss base on relative height of the proposal and current site, see figure 7.

Figure 7: Future context with proposal - Proposed site in cyan and red outline, future context in blue outline

1.5.4. Contextual Analysis:

An analysis was undertaken of the visual and statutory planning contexts relevant to the assessment of visual impacts in a Development Application. Images showing the proposal in the context of future development for the area can be found in Appendix A which accompanies this document.

1.5.5. Visual Impact Analysis:

The visual impacts of the proposed development were analysed in relation to the visual context and assessed for their likely impact upon the local area and upon specific residential properties.

1.5.6. Statutory Planning Assessment:

The results of the local view impact assessment are included in Section 3 of this report.

1.6. References

The following documentation and references informed the preparation of this report:

- *Design Documentation*
- *The design drawings and information relied upon for the preparations of this report were prepared by SJB Architects*
- *Newcastle City Council LEP 2012*
- *Delfs Lascelles*
- *Photography by Urbaine Design Group*
- *Photomontages and 3D by Urbaine Design Group*

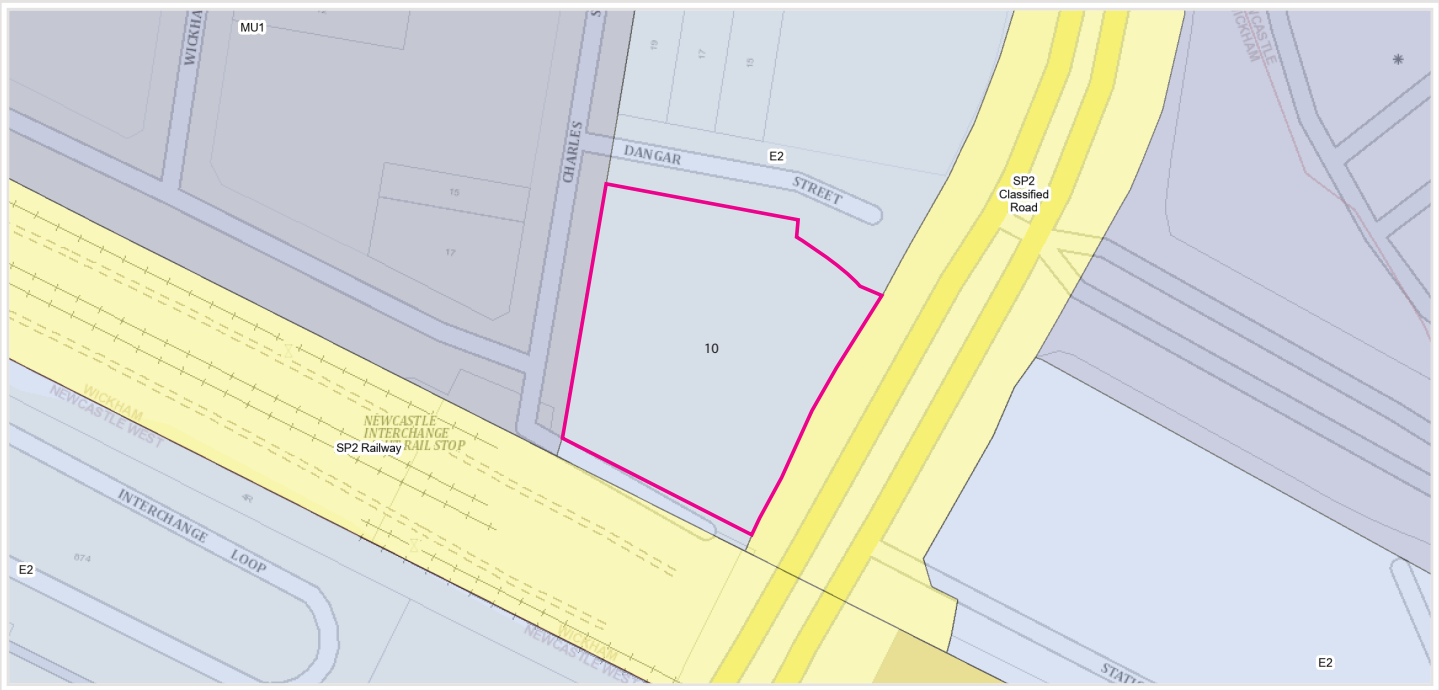


Figure 8: Land zoning map, indicating site with magenta outline.

2. THE SITE AND THE VISUAL CONTEXT

Visual impacts occur within an existing visual context where they can affect its character and amenity. This section of the report describes the existing visual context and identifies its defining visual characteristics.

Defining the local area relevant to the visual assessment of a proposed development is subject to possible cognitive mapping considerations and statutory planning requirements. Notwithstanding these issues, the surrounding local area that may be affected by the visual impact of the proposed development is considered to be the area identified on in the topographical area map, Figure 9.

Although some individuals may experience the visual context from private properties with associated views, the general public primarily experiences the visual context from within the public realm where they form impressions in relation to its character and amenity. The public realm is generally considered to include the public roads, reserves, open spaces and public buildings.

The visual context is subject to “frames of reference” that structure the cognitive association of visual elements. The “local area” (as discussed above) provides one such frame of reference. Other “frames of reference” include the different contextual scales at which visual associations are established and influence the legibility, character and amenity of the urban environment. Within the scope of this report three contextual scales are considered relevant to the analysis of the visual context and the visual impact of the proposed development.

The ‘Street Context’ provides a frame of reference for reviewing the visual relationship of the new development

(and in particular its facades) in relation to the adjoining pedestrian spaces and roads. Elements of the development within this frame of reference are experienced in relatively close proximity where, if compatible with the human scale they are more likely to facilitate positive visual engagement and contribute to the “activation” of adjoining pedestrian spaces.

Figure 9: Lidar Point cloud including trees and buildings with gradient ramp to show topography, proposed site in white outline.

The ’Neighbourhood Context’ provides a broader frame of reference that relates the appearance of the development as a whole to the appearance of other developments within the local area. As a frame of reference, it evolves from the understanding gained after experiencing the site context and the low density of development. Within this context the relative appearance, size and scale of different buildings are compared for their visual compatibility and contribution to a shared character from which a unique “sense of place” may emerge. This frame of reference involves the consideration of developments not necessarily available to view at the same time. It therefore has greater recourse to memory and the need to consider developments separated in time and space. The neighbourhood context is relevant to the visual ’legibility’ of a development and its relationship to other developments, which informs the cognitive mapping of the local area to provide an understanding of its arrangement and functionality.

The ‘Town / City Context’ provides a frame of reference that relates the significance of key developments or neighbourhoods to the town as a whole. The contribution that distinctive neighbourhoods make (or may potentially make) to the image of the city can be affected by the visual impact of an individual development through its influence on the neighbourhood’s character and legibility. Within this context, it is also important to be aware of other proposed developments in the area.

2.1. The Visual Context

The visual context of Wickham is characterised by a layered and transitional inner-urban environment, where historic industrial elements, established low-scale residential development, and emerging mid-rise buildings coexist within a compact setting. The area displays a diverse and evolving built form, resulting in a visually varied streetscape with no single dominant architectural typology. Views are typically filtered and intermittent, shaped by street alignments, vegetation, and existing structures, while larger contemporary buildings are evident in the background, contributing to an emerging urban identity. The presence of rail and shipping infrastructure and former industrial uses provides a robust and utilitarian character, which is increasingly complemented by modern development featuring articulated façades and contemporary materials. Landscape elements, including street trees and greenery, assist in softening the built form and maintaining a human-scale experience. Overall, Wickham presents as a coherent yet dynamic visual environment, reflecting its ongoing transition to an inner city

neighbourhood.

2.2. Visual Features and Local Landmarks

Particular elements in the urban pattern, through either location and/or built form provide visual nodes and landmarks that assist in differentiating locations within the broader visual context. The following visual nodes are considered to be of the greatest significance in terms of their contribution to the character and legibility of the local and surrounding area:

The focus of all the properties is to the east and the Hunter River, the northern shore of Carrington shipping wharfs and industrial areas across to Stockton and the harbour entrance.

2.3. Streetscapes

Wickham's streetscape can be characterised as a transitional inner-urban precinct with a layered industrial and emerging residential identity, where older infrastructure and fine-grain housing are being complemented by newer, higher-density development.

2.4. The selected view locations for the local view analysis

As a result of the site's topography, the visual impact is primarily relevant to the areas to the south and west of the subject site. A large number of site photos were taken and a smaller number of specific views selected from these, relevant for private viewing locations, as described above. The selected photos are intended to allow consideration of the visual and urban impact of the new development at a local level and, specifically, from the neighbouring properties and public viewing locations.

2.5. Context of View

The context of the view relates to where the proposed development is being viewed from. The context is different if viewed from a neighbouring building, or garden, as is the case here, where views can be considered for an extended period of time, as opposed to a glimpse obtained from a moving vehicle.

2.6. Extent of View

The extent to which various components of a development would be visible is critical. For example, if the visibility assessment is of a multi-storey development proposal in a low-density context of 2 to 3 storey buildings, it would be considered to have a significant local scale visual impact, whereas if a development proposal is located in an area of a CBD containing buildings of a similar scale and height, it may be considered to have a lower scale visual impact.

The capacity of the landscape to absorb the development is to be ranked as high, medium or low, with a low ranking representing the highest visual impact upon the scenic environmental quality of the specific locality, since there is little capacity to absorb the visual impact within the landscape.

3. VISUAL IMPACT OF THE PROPOSED DEVELOPMENT

3.1. Visual Impact Assessments viewpoint locations

Visual Impact Assessments from 11 viewpoint locations – from public places

3.1.1. Method of Assessment

In order to allow a quantitative assessment of the visual impact locations where view impact and view loss,

a Canon EOS Full Frame Digital Camera with fixed focal length 24mm lens was used to take all viewpoint photos, at an eye level of 1600mm.

The photos include location descriptions, to be read in conjunction with the site map, contained in Appendix A. Additionally, information is supplied as to the distance from the site boundary for each location and the distance

to the closest built form is provided in Section 3.1.2 below.

To assess the visual impact, there are 2 relevant aspects - view loss of actual substance (landscape, middle and distance view elements etc.) and also direct sky view loss. To a large extent, the value associated with a view is subjective, although a range of relative values can be assigned to assist with comparing views. Figure 9 is a scale of values from 0 to 15, used to allow a numeric value to be given to a particular view, for the purposes of comparison.

On the same table are a series of values, from zero to 15, that reflect the amount of visual impact.

The second means of assessment relates to assigning a qualitative value to the existing view, based on criteria of visual quality defined in the table – see figure 10.

The % visual content is then assessed, together with a visual assessment of the new development's ability to blend into the existing surroundings.

TENACITY / SCALE / VALUE		VISUAL IMPACT	VISUAL QUALITY
NIL	0	**NEGLIGIBLE** No negative impact on the pre-existing visual quality of the view	N/A
NEGILIBLE	1	**LOW** A minor negative impact on the pre-existing visual quality of the view Examples: minor impact on natural landscapes no impact on iconic views impact on small number of receivers significant distance between the development and receiver	Predominant presence of low quality man made features Minimal views of natural formations (e.g. cliffs, mountains, coastlines, waterways, ridges etc.) Uniformity of land forms
	2		
	3		
MINOR	4		
	5		
	6	**MEDIUM** A medium negative impact on the pre-existing visual quality of the view Examples: moderate impact on iconic views or natural landscapes impact on moderate number of receivers located nearby the receiver	Presence of some natural features mixed with manmade features Some views of distinct natural formations (e.g. cliffs, mountains, coastlines, waterways, ridges etc.)
	7		
MODERATE	8		
	9		
	10		
SEVERE	11	**HIGH** A high negative impact on the pre-existing visual quality of a view Examples: loss of iconic view impact on significant number of receivers owershadowing effect directly adjacent the receiver	Predominantly natural features Minimal manmade features, however if present of a high architectural standard Significant views of distinct natural formations (e.g. cliffs, mountains, coastlines, waterways, ridges etc.) Presence of iconic regional views of landmark features
	12		
DEVASTATING	13		
	14		
	15		

Figure 10: Urbaine Group Assessment Table

3.1.2. Assessment at selected viewpoints

VIEWPOINT 01

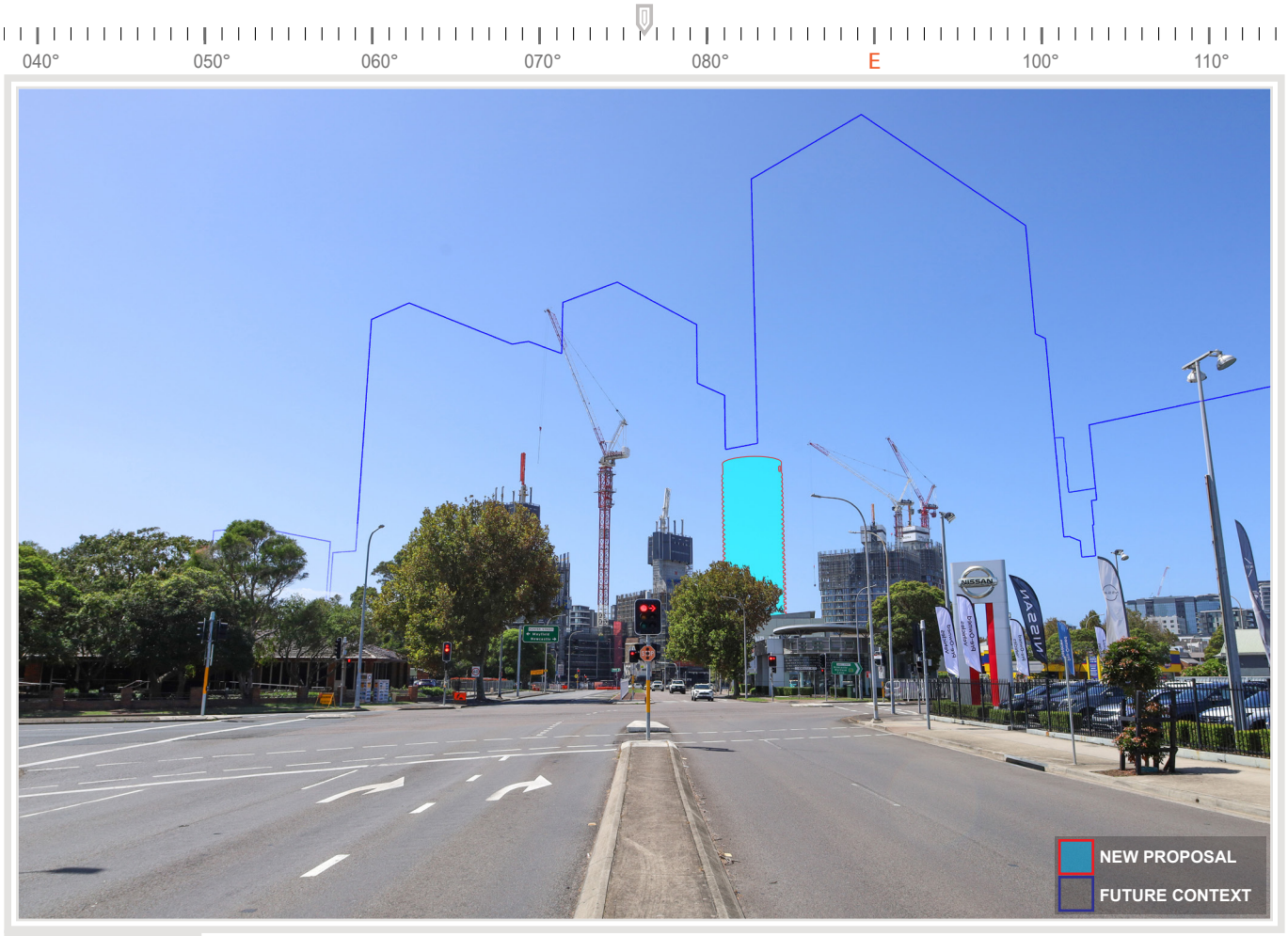
Existing site photo - Charles Street

From standing position
RL + 7.90m - Distance to boundary 541.87m - Bearing direction 76.13°

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

urbaine DESIGN GROUP



Visual impact

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 61%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 0% : 100%*
- *Existing Visual Assessment Scale no: 5 /15 & Visual Impact Assessment Scale no: 8 /15*

This is a static, public viewpoint from the Charles Street facing northeast, which encompasses multiple traffic lanes divided by a slender central median leading to its junction with Parry Street. In the midground, the junction with Parry Street constitutes a significant urban intersection. To the south-east, a commercial frontage is apparent, housing a vehicle dealership. In contrast, the north-east presents a well-maintained landscape of the Sacred Heart Cathedral, adorned with mature street trees and low-profile structures that border the roadway. The background is defined by mid- and high-rise buildings currently under development, with several tower cranes prominently visible above the skyline.

The visual impact of the new proposal, from this location, is assessed as Moderate. The lower sections of the proposed development will predominantly be obscured by existing built form and surrounding vegetation, thereby limiting their visibility within the immediate streetscape. However, the elevated levels of the tower will be clearly visible above this foreground layer, forming a prominent element within the future skyline.

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: Low-to-Medium*
- *View location: Footpath - public viewpoint.*
- *Extent of impact: Moderate*

Reasonableness of proposal: Within the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct.

VIEWPOINT 02

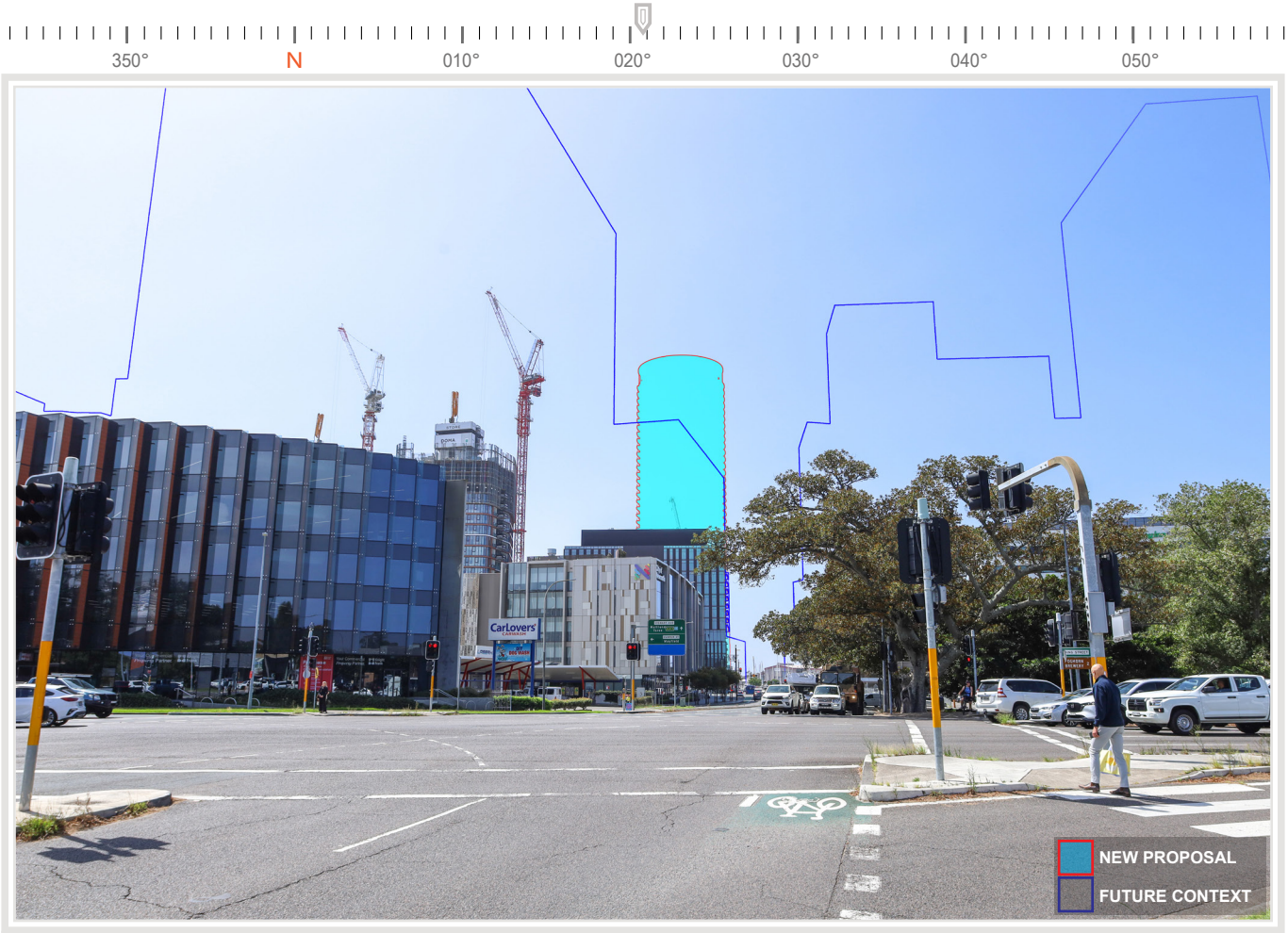
Existing site photo - King Street

From standing position at its signalised intersection with Stewart Avenue
RL +6.94 m - Distance to boundary 351.54m - Bearing direction 20.89 °

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

urbaine DESIGN GROUP



Visual impact

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 52%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 2% : 98%*
- *Existing Visual Assessment Scale no: 5 /15 & Visual Impact Assessment Scale no: 8 /15*

This is a static, public viewpoint from the intersection from King Street at its signalised intersection with Stewart Avenue, oriented predominantly to the north. The street configuration expands significantly to the north east and Parry Street extending westward. To the northeast, a mature canopy of trees encircles the intersection, softening the appearance of the built environment while partially obscuring views of the surrounding buildings. The commercial building No. 168 Parry Street, establishes a prominent vertical edge on the northwestern corner. Adjacent to this structure to the north, the commercial building No. 12 Stewart Avenue contributes to a unified urban streetscape. In the background, several construction cranes are visible above the urban landscape, confirming the ongoing revitalisation of the surrounding area.

The visual impact of the new proposal, from this location, is assessed as Moderate. The lower sections of the proposed development will predominantly be obscured by existing built form and surrounding vegetation, thereby limiting their visibility within the immediate streetscape. However, the elevated levels of the tower will be clearly visible above this foreground layer, forming a prominent element within the skyline.

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: Low-to-Medium*
- *View location: King Street pavement - public viewpoint.*
- *Extent of impact: Moderate*

Reasonableness of proposal: Within the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct. Its relative vertical isolation will diminish as further development proposals are approved.

VIEWPOINT 03

Existing site photo - Honeysuckle Walk

From standing position
RL + 4.14m - Distance to boundary 617.98m - Bearing direction 282 °

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

urbaine DESIGN GROUP

Visual impact

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 89%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 10% : 90%*
- *Existing Visual Assessment Scale no: 10/15 & Visual Impact Assessment Scale no: 9/15*

This is a static, public viewpoint from Honeysuckle Walk, facing a northwesterly direction, the Hunter River stretches towards the north. In the foreground, a landscaped waterfront promenade seamlessly aligns with the riverbank, characterised by a paved pedestrian footpath to the west and planted verge featuring low shrubs, modest-sized accent tree. A stone revetment delineates the immediate boundary of the water. In the midground, a series of mid-rise residential structures line the waterfront, creating a cohesive urban environment. To the north, Hunter River spans a wide expanse and merges with Throsby Creek. The northeastern edge reveals the marina of the Newcastle Cruising Yacht Club, where a dense cluster of sailboat masts rise vertically at Throsby Creek against the backdrop of the horizon. In the background, additional residential towers and construction cranes ascend above the waterfront, signifying ongoing development. Interspersed along the distant shoreline are lower-scale buildings and patches of vegetation.

The visual impact of the new proposal, from this location, is assessed as Moderate. The proposed tower will impact the sky view and alter the background character, however, it integrates with the surrounding context and contributes to a more urbanised visual environment.

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: Medium-to-High*
- *View location: Waterfront walkway - public viewpoint*
- *Extent of impact: Moderate*

Reasonableness of proposal: Within the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct. The increased scale will become more integrated with the approval of other proposals of similar height within this area.

VIEWPOINT 04

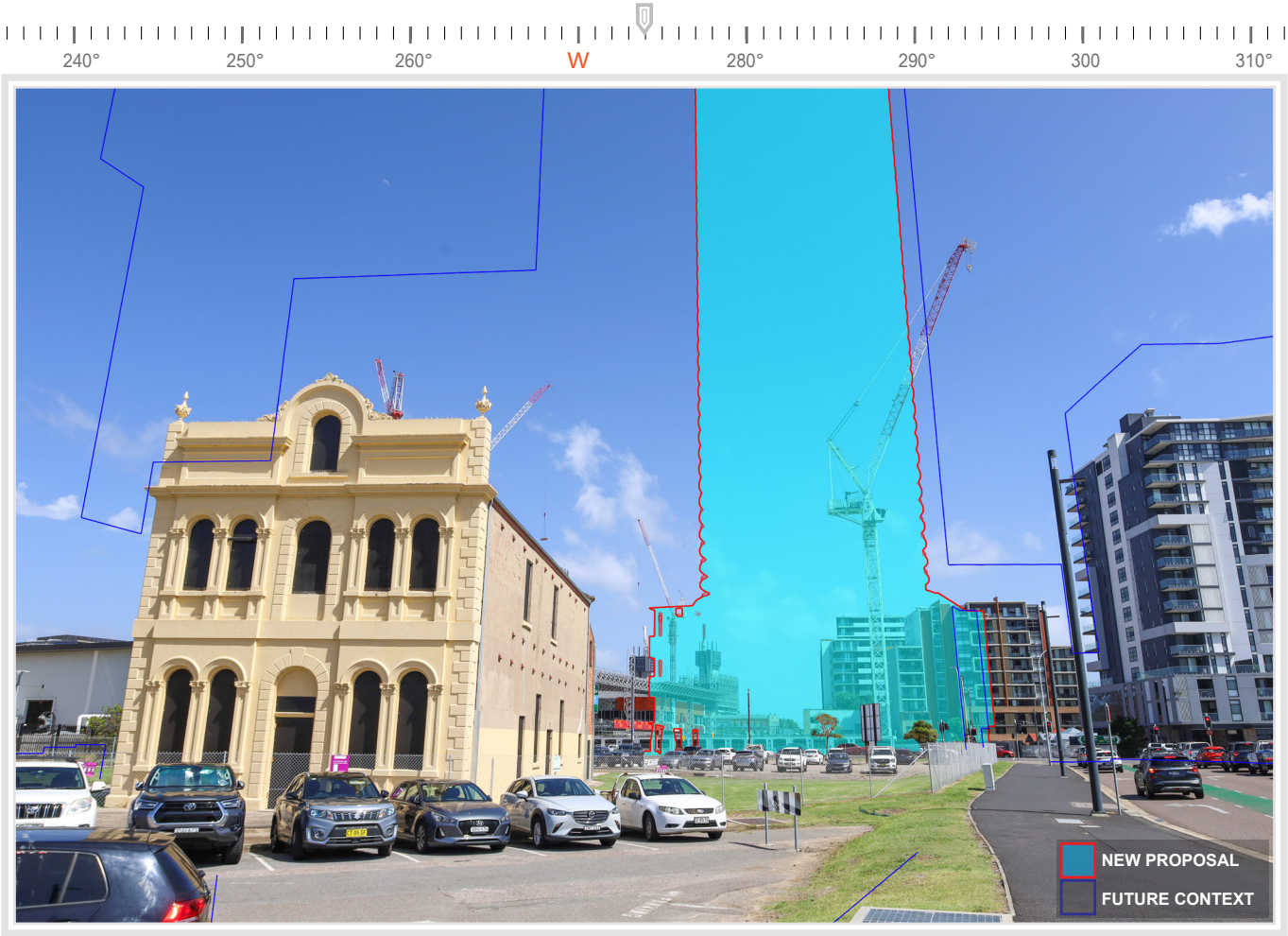
Existing site photo - Honeysuckle Drive

From standing position
RL + 4.60m - Distance to boundary 133.83m - Bearing direction 273.95 °

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

urbaine DESIGN GROUP



Visual impact

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 96%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 14% : 86%*
- *Existing Visual Assessment Scale no: 5 /15 & Visual Impact Assessment Scale no: 11/15*

This is a static, public viewpoint from Honeysuckle Drive, oriented towards the northwest. In the foreground, a paved footpath is accompanied by a narrow strip of grass. To the west, the Former School of Arts building, Wickham, a two-storey heritage structure, delineates the edge of the streetscape, contributing a significant historical character and vertical emphasis. In the midground, an open lot transitions into an active construction site, characterised by several tower cranes erected both vertically and diagonally, signalling ongoing redevelopment efforts. This area features low-rise structural frames and buildings at various stages of completion. To the north and northeast, multi-storey residential structures along Bishopsgate Street and Dangar Street create a densely populated urban backdrop.

The visual impact of the new proposal, from this location, is assessed as Severe. The proposed development will influence the midground and sky view, as its height and scale create a contrast to the historical character of the former School of Arts building. Nevertheless, it harmonises with the surrounding context, where both current and prospective developments are apparent. As the neighbouring sites are developed, so the visual impact of the subject proposal will diminish, to Moderate.

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: Low-to-Medium*
- *View location: Pavement of Honeysuckle Drive - public viewpoint*
- *Extent of impact: Severe (reducing to Moderate when assessed within the context of future developments.)*

Reasonableness of proposal: Within the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct. The increased scale will become more integrated with the approval of other proposals of similar height within this area.

VIEWPOINT 05

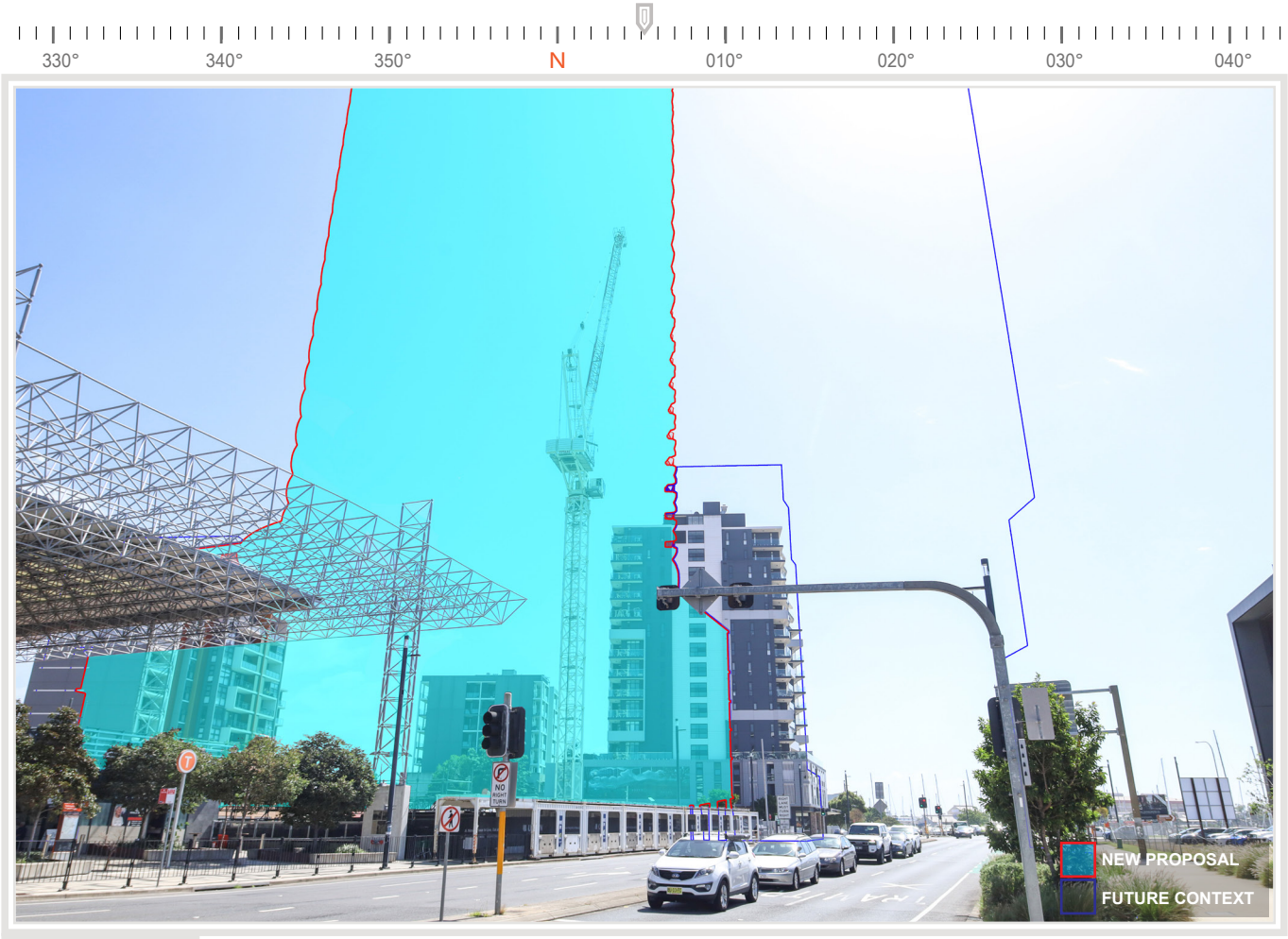
Existing site photo - Hannell Street

From standing position
RL + 4.61m - Distance to boundary 51.63m - Bearing direction 5.10 °

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

urbaine DESIGN GROUP



Visual impact

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 73%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 18% : 82%*
- *Existing Visual Assessment Scale no: 5 /15 & Visual Impact Assessment Scale no: 10/15*

This is a static, public viewpoint from Hannell Street facing north. In the foreground, the roadway extends in a north-south direction, featuring signalised intersections and visible pedestrian facilities. To the northwest, a substantial open steel canopy structure with a lattice framework delineates the streetscape boundary. In the midground, a notable multi-storey residential building situated along Hannell Street commands the central northern view. Nearby structures of comparable height can be seen to the northwest and northeast, reinforcing the area's urban density. A construction crane towers in the northern midground, signalling active development in the vicinity. Low-level vegetation and street landscaping are incorporated along the northeastern boundary. In the background, additional vertical structures and distant buildings are subtly discernible along the northern axis, further highlighting the dynamic nature of the skyline.

The visual impact of the new proposal, from this location, is assessed as Moderate-to-Severe, mostly due to its proximity, scale and bulk. The proposed tower will affect the view towards the sky, mostly. Nevertheless, it will integrate with its surroundings, and contribute to a more urbanised environment. As the neighbouring sites are developed, so the visual impact of the subject proposal will diminish, to Moderate.

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: Low-to-Medium*
- *View location: Pavement on Hannell Street - public viewpoint*
- *Extent of impact: Moderate-to-Severe (reducing to Moderate when assessed within the future context).*

Reasonableness of proposal: Within the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct. The podium level is consistent with the bulk and scale of existing development, while the variance in height will align with future developments as they are approved.

VIEWPOINT 06

Existing site photo - Charles Street

From standing position
RL + 3.45m - Distance to boundary 15.16m - Bearing direction 29.28 °

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

urbaine DESIGN GROUP

Visual impact

Visual Impact Assessment:
Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 14%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 81% : 19%*
- *Existing Visual Assessment Scale no: 4 /15 & Visual Impact Assessment Scale no: 9/15*

This is a static, public viewpoint along Charles Street facing northeast, showcasing a transitional urban streetscape. In the foreground, the pedestrian footpath and steps along the western side can be seen, punctuated by modest landscaping and street furniture. To the west, low-rise structures with a blend of residential and commercial uses delineate the immediate streetscape boundary. In the midground, a series of smaller, detached residences at numbers 19, 17, and 15 Dangar Street is positioned slightly to the north-northeast, creating a contrast in both scale and character. Beyond these, to the north and northeast, a group of multi-storey residential buildings rises prominently. To the east, a construction hoarding borders the street, signifying ongoing development and the prospective architectural landscape along this edge. The forthcoming high-rise buildings to the northeast and east enhance the urban skyline, while the scattered vegetation within the midground serves to soften the transition between the low-rise and high-rise components.

The visual impact of the new proposal, from this location, is assessed as Moderate. The proposed tower primarily influences the midground, exerting a minimal effect on the overall view of the sky while seamlessly integrating with the streetscape.

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: Low*
- *View location: Pavement on Charles Street - public viewpoint.*
- *Extent of impact: Moderate*

Reasonableness of proposal: Within the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct. The podium level is consistent with the bulk and scale of existing development, while the variance in height will align with future developments as they are approved.

VIEWPOINT 07

Existing site photo - Station Street

From standing position
RL + 4.16m - Distance to boundary 22.71m - Bearing direction 45.22 °

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

Visual impact

Visual Impact Assessment:
Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 18%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 44% : 56%*
- *Existing Visual Assessment Scale no: 4 /15 & Visual Impact Assessment Scale no: 9/15*

This is a static, private viewpoint from Station Street, oriented northeast, at the T-junction with Charles Street. In the foreground, a controlled intersection and designated pedestrian zones delineate the immediate environment. To the northwest, a commercial establishment with signage borders the street, enhancing the vibrant urban atmosphere. In the midground, at the subject site, along the eastern side a construction hoarding runs, enclosing active development site. A prominent construction crane ascends to the east-northeast, indicating ongoing building operations. Immediately beyond this, a grouping of multi-storey residential towers predominantly shapes the northern and northeastern skyline. At a lower elevation within the midground, low-rise developments at 15, 17, and 19 Dangar Street are apparent, providing a contrast in scale and exemplifying the transitional character of the area. To the north and northeast, the built environment continues with an array of additional mid- to high-rise structures, collectively contributing to a cohesive urban skyline. Limited vegetation is present, primarily in scattered areas throughout the midground, providing slight visual relief.

The visual impact of the new proposal, from this location, is assessed as Moderate

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: Low*
- *View location: Pavement on Station Street - public viewpoint*
- *Extent of impact: Moderate*

Reasonableness of proposal: Within the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct. The podium level is consistent with the bulk and scale of existing development, while the variance in height will align with future developments as they are approved.

VIEWPOINT 08

Existing site photo - Wickham Street

From standing position at Wickham Street at its juncture with Station Street
RL + 4.05m - Distance to boundary 98.81m - Bearing direction 119.44 °

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

Visual impact

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 26%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 9% : 91%*
- *Existing Visual Assessment Scale no: 5 /15 & Visual Impact Assessment Scale no: 8 /15*

This is a static, public viewpoint from Wickham Street at its juncture with Station Street, directed towards the east, Station Street stretches eastward in the foreground, flanked by paved footpaths on both sides. On the northern side, the prominent multi-storey residential structure located at No. 1 Union Street creates a significant street boundary. The Newcastle Interchange rail corridor runs parallel to Station Street on the southeast side, featuring a covered platform structure supported by a steel canopy and visible structural framework. The edge of the corridor is enhanced by low landscaping and fencing, which serve to partially obscure views into the transport infrastructure. In the midground, the station platform and its canopy are present. Meanwhile, the background is characterised by larger commercial and mixed-use buildings situated to the southeast, with further urban developments continuing to the east.

The visual impact of the new proposal, from this location, is assessed as Moderate. The proposed development's tower will have an impact on the midground and, to some extent, the skyline along Station Street. However, it does not interfere with the established character of the surrounding area. Instead, it fits seamlessly into the existing urban context, contributing to a more defined streetscape while reinforcing the area's growing urban character.

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: Low-to-Medium*
- *View location: Pavement on Wickham Street - public viewpoint.*
- *Extent of impact: Moderate*

Reasonableness of proposal: WWithin the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct.

VIEWPOINT 09

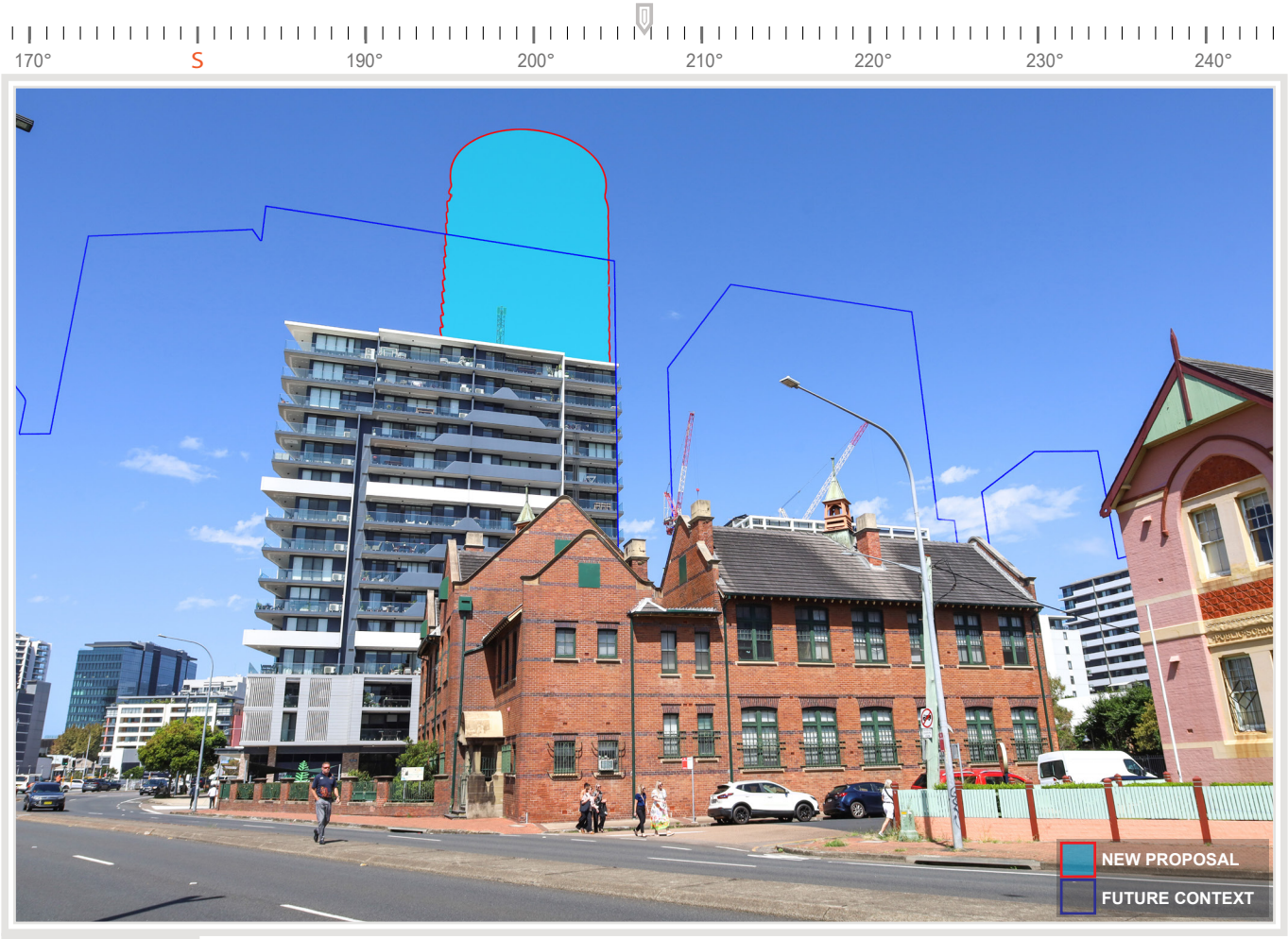
Existing site photo - Hannell Street

From standing position
RL + 4.70m - Distance to boundary 161.86m - Bearing direction 206.60 °

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

urbaine DESIGN GROUP



Visual impact

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 31%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 00% : 100%*
- *Existing Visual Assessment Scale no: 7 /15 & Visual Impact Assessment Scale no: 8/15*

This is a static, public viewpoint from Hannell Street, oriented towards the southeast, presenting an urban landscape where heritage architecture notably contrasts with recent high-rise structures. In the foreground, Hannell Street is characterised by a broad roadway flanked by pedestrian footpaths. In the midground, a number of heritage brick buildings that belong to the Wickham Public School can be seen. These buildings are on the street's eastern and southeastern sides. In the background, a residential tower ascends along Bishopsgate Street to the southeast, surpassing the height of the heritage rooftops. Additionally, further to the south and southwest, various commercial and mixed-use buildings contribute to the overall urban environment.

The visual impact of the new proposal, from this location, is assessed as Moderate. The lower levels of the proposed development will be mostly obscured by existing buildings, while the upper portion of the proposed tower will be visible and influence the sky view. The tower will blend into the changing character of the surrounding area, contributing to a more urban appearance while not detracting from the overall streetscape.

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: Medium*
- *View location: Pavement on Hannell Street - public viewpoint.*
- *Extent of impact: Moderate*

Reasonableness of proposal: Within the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct. The increased scale will become more integrated with the approval of other proposals of similar height within this area.

VIEWPOINT 10

Existing site photo - Hannell Street

From standing position
RL + 4.59m - Distance to boundary 273.11m - Bearing direction 183.58 °

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

Visual impact

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 78%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 4% : 96%*
- *Existing Visual Assessment Scale no: 8 /15 & Visual Impact Assessment Scale no: 10/15*

This is a static, public viewpoint from Hannell Street facing south. In the foreground, the intersection with Throsby Street to the west is characterised by paved footpaths to the east and traffic signal installations located along the edge of the thoroughfare. The midground features a blend of established structures. To the southeast, a series of newly constructed residential buildings align the street, accompanied by shrubbery along the footpath. The Albion Hotel is on a prominent corner to the west. It has a traditional low-rise architectural style and an uninterrupted street front. Further south, the heritage-style brick edifices of the Wickham Public School create a visual contrast in materials and scale. In the background, taller residential buildings rise prominently both centrally and towards the south-southwest. Several construction cranes are observable across the southern skyline, signifying ongoing development and reinforcing the progressive character of the area.

The visual impact of the new proposal, from this location, is assessed as Moderate-to-Severe. The proposed tower is expected to have an impact on the skyline's visual aspect, its lower sections will be mostly obscured by surrounding structures, while the upper portion will become a prominent feature. Furthermore, the presence of construction cranes indicates that there are ongoing and upcoming developments in the area, implying that the proposed structure will blend in with the changing urban landscape and, in time, enhance and enrich the surrounding environment. As the neighbouring sites are developed, so the visual impact of the subject proposal will diminish, to Moderate.

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: Medium*
- *View location: Pavement on Hannell Street - public viewpoint.*
- *Extent of impact: Moderate-to-Severe (reducing to Moderate when assessed within the future context).*

Reasonableness of proposal: Within the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct.

VIEWPOINT 11

Existing site photo - Cowper Street North

From standing position
RL + 8.13m - Distance to boundary 721.02m - Bearing direction 192.72 °

Camera - Canon RP
Lens - 24mm

Photomontage of Proposal

urbaine DESIGN GROUP

Visual impact

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 70%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 6% : 94%*
- *Existing Visual Assessment Scale no: 12 /15 & Visual Impact Assessment Scale no: 9/15*

This is a static, public viewpoint from Cowper Street North, oriented towards the southwest. In the foreground, the Thrsby Creek foreshore is characterised by a rocky embankment interspersed with low-lying vegetation, transitioning smoothly to tranquil waters featuring a small floating pontoon and several moored recreational vessels. Vertical mooring posts emerge from the water. Dominating the midground is a bustling marina situated within Newcastle Harbour, populated by numerous vessels arranged along the wharves and jetties. The opposite shore is marked by marine-related infrastructure and low-rise waterfront buildings, including those associated with Maritime & Safety Training NSW. In the background, a continuous array of mid- to high-rise structures constitutes a dynamic urban skyline that extends laterally across the horizon. A line of palm trees and various scattered vegetation elements provide a softening contrast to certain sections of the built environment along the waterfront.

The visual impact of the new proposal, from this location, is assessed as Moderate. The skyline will be significantly altered by the proposed tower, as its upper sections will be clearly visible above the current architectural landscape, while its lower segments will be primarily concealed by adjacent structures. This tower is expected to introduce a substantial vertical feature to the skyline. However, the presence of construction cranes in the background suggests ongoing development, suggesting that this proposal will integrate into the evolving urban context.

LEC Judgement: Rose Bay Marina v Woollahra Council (2013) Assessment Criteria:

- *Value of view: High*
- *View location: Pavement on Cowper Street - public viewpoint.*
- *Extent of impact: Moderate*

Reasonableness of proposal: Within the context of the anticipated future character and ongoing revitalisation of the surrounding area, the proposed structure is considered consistent with the strategic planning framework and emerging urban density for the precinct. The increased scale will become more integrated with the approval of other proposals of similar height within this area.

4. SUMMARY ASSESSMENT

This Visual Impact Assessment demonstrates that the proposed mixed-use development at 10 Dangar Street, Wickham is capable of achieving an acceptable visual planning outcome having regard to the site's prominent location immediately north of the Newcastle Interchange, the evolving metropolitan character of the Wickham precinct, and the scale of change anticipated through the strategic planning framework applying to the site. The report has been prepared in support of a State Significant Development Application and concurrent rezoning proposal for a 43-storey mixed-use tower and assesses the proposal within its street, neighbourhood and wider city contexts.

The assessment adopts a methodology informed by relevant Land and Environment Court planning principles, including the approach in Rose Bay Marina Pty Ltd v Woollahra Municipal Council, and considers the likely visual effects of the proposal from a series of representative public viewpoints in the surrounding locality. In this regard, the report assesses the proposal through verified photomontages, contextual analysis and site-based review of visual sensitivity, with particular regard to publicly accessible locations from which the development is likely to be experienced.

A total of 11 public viewpoints were assessed across the surrounding streets, waterfront locations and broader Wickham / Honeysuckle area. These demonstrate that the proposal will be clearly visible from a range of locations, with the greatest impacts occurring in closer views near the site where the tower and podium will more directly influence the midground, skyline and sky view. In this respect, Viewpoint 04 from Honeysuckle Drive is assessed as Severe, while Viewpoints 05 and 10 are assessed as Moderate-to-Severe due principally to proximity, scale and the degree of sky view affected. As the neighbouring sites are developed, so the visual impact of the subject proposal will diminish, within these locations, to a Moderate value. Furthermore, these views are generally experienced within a low to medium value urban setting already undergoing substantial redevelopment, and concludes that the proposal remains reasonable in the context of the locality's anticipated future character.

The balance of viewpoints indicate a lesser level of impact. Viewpoints 01, 02, 03, 06, 07, 08, 09 and 11 are each assessed as Moderate, notwithstanding that some of these include medium or higher-value public outlooks such as the waterfront views from Honeysuckle Walk and Cowper Street North. In those cases, the report identifies that the proposal will alter part of the skyline and reduce some sky view, but that the tower is generally read as an addition to an already changing urban backdrop rather than as an isolated or visually discordant intrusion. Importantly, the lower portions of the development are in many instances screened or moderated by existing built form, vegetation, transport infrastructure or the established pattern of surrounding development.

The findings are consistent with the broader visual context described in the report. Wickham is identified as a layered and transitional inner-urban environment, where historic industrial elements, rail and shipping infrastructure, established low-scale buildings and emerging mid-rise and high-rise forms coexist within a compact setting. The report notes that the locality does not exhibit a single dominant built form typology, and that larger contemporary buildings, cranes and redevelopment sites already contribute to an emerging urban identity. Within that context, the proposed tower is not assessed as anomalous, but rather as part of the continuing transition of Wickham, Newcastle West End and Honeysuckle toward a denser mixed-use metropolitan centre.

While the proposal will introduce a substantial vertical element and will alter parts of the existing skyline from a number of public locations, the assessment indicates that these changes occur predominantly within a highly urbanised and strategically identified renewal precinct with substantial capacity to absorb additional height and density. Even from more sensitive public viewpoints, including along the waterfront, the report concludes that the proposal will integrate with the evolving future context and will not give rise to an unacceptable loss of public visual amenity when considered against the planning framework and the broader pattern of approved and anticipated development in the area.

Having regard to the photomontage analysis, the range of viewpoint outcomes, the strategic significance of the site, and the changing visual character of Wickham, it is concluded that the proposal is acceptable in visual impact terms. Although the development will be prominent from a number of surrounding public locations, that prominence is broadly consistent with the intended future scale of development in this precinct and does not give rise to adverse visual impacts of a nature or extent that would warrant refusal on visual grounds. On that basis, the proposal may be regarded as achieving a satisfactory and acceptable visual impact outcome for the purposes of the SSDA and concurrent rezoning proposal.

Based on our 3D analysis, photography, and site visits, it would be my recommendation that the State Significant Development Application be approved on the grounds of an acceptable amount of visual impact and view loss, when assessed against the permissible building envelope for the site.

John Aspinall, Director,

urbaine design group pty ltd

5. APPENDICES

APPENDIX A: Assessment Images - panoramic (additional PDF)

APPENDIX B: Aspinall CV

- *LEC Guidelines for Photomontages*
- *Visual Impact Assessment Methodology*

APPENDIX C: Survey and camera positions

APPENDIX D: Wireframe/alignment images

APPENDIX E: Site photography

5.1. APPENDIX B: Methodology, CV and LEC Guidelines

JOHN ASPINALL. director: urbaine design group

UK Qualifed Architect RIBA BA(Hons) BArch(Hons) Liverpool University, UK.

24 years' architectural experience in London and Sydney.
Halpin Stow Partnership, London, SW1
John Andrews International, Sydney
Cox and Partners, Sydney
Seidler and associates
NBRS Architects, Milsons Point
Urbaine Pty Ltd (current)

Design Competitions:

UK 1990 – Final 6. RIBA 'housing in a hostile environment'. Exhibited at the Royal Academy, London
UK Design Council – innovation development scheme finalist – various products, 1990.
Winner: International Design Competition: Sydney Town Hall, 2000
Finalist: Boy Charlton Swimming pool Competition, Sydney, 2001
Finalist: Coney Island Redevelopment Competition, NY 2003

Design Tutor: UTS, Sydney, 1997 – 2002

This role involved tutoring students within years 1 to 3 of the BA Architecture course. Specifically, I developed programs and tasks to break down the conventional problem-solving thinking, instilled through the secondary education system. Weekly briefs would seek to challenge their preconceived ideas and encourage a return to design thinking, based on First Principles.

Design Tutor: UNSW, Sydney 2002 – 2005

This role involved tutoring students within years 4 to 6 of the BArch course. Major design projects would be undertaken during this time, lasting between 6 and 8 weeks. I was focused on encouraging rationality of design decision-making, rather than post-rationalisation, which is an ongoing difficulty in design justification.

Current Position: URBAINE GROUP Pty Ltd

Currently, Principal Architect of Urbaine - architectural design development and visualisation consultancy: 24 staff, with offices in: Sydney, Shanghai, Doha and Sarajevo.

Urbaine specialises in design development via interactive 3d modelling.

Urbaine's scale of work varies from city master planning to furniture and product design, while our client base consists of architects, Government bodies, developers, interior designers, planners, advertising agencies and video producers.

URBAINE encourages all clients to bring the 3D visualisaton facility into the design process sufficiently early to allow far more effective design development in a short time frame. This process is utilised extensively by many local and international companies, including Lend Lease, Multiplex, Hassell, PTW, Foster and Partners, City of Sydney, Landcom and several other Governmental bodies. URBAINE involves all members of the design team in assessing the impact of design decisions from the earliest stages of concept design. Because much of URBAINE's work is International, the 3D CAD model projects are rotated between the various offices, effectively allowing a 24hr cycle of operation during the design development process, for clients in any location.

An ever-increasing proportion of URBAINE"S work is related to public consultation visualisations and assessments. As a result, there has also been an increase in the Land And Environment Court representations. Extensive experience in creating and validating photomontaged views of building and environmental proposals. Experience with 3D photmonages began in 1990 and has included work for many of the world's leading architectural practices and legal firms.

Co-Founder Quicksmart Homes Pty Ltd. , 2007 - 2009

Responsible for the design and construction of 360 student accommodation building at ANU Canberra, utilising standard shipping containers as the base modules.

Design Principal and co-owner of Excalibur Modular Systems Pty Ltd: 2009 to present.

High specification prefabricated building solutions, designed in Sydney and being produced in China.

Excalibur has developed a number of modular designs for instant delivery and deployment around the world. Currently working with the Cameroon Government providing social infrastructure for this rapidly developing country.

The modular accommodation represents a very low carbon footprint solution

Expert Legal Witness, 2005 to present

In Australia and the UK, for the Land and Environment Court. Expert witness for visual impact studies of new developments.

Currently consulting with many NSW Councils and large developers and planners, including City of Sydney, Lend Lease, Mirvac, Foster + Partners, Linklaters.

Author of several articles in ‘Planning Australia’ and ‘Architecture Australia’ relating to design development and to the assessment of visual impacts, specifically related to the accuracy of photomontaging.

Currently preparing a set of revised recommendations for the Land and Environment Court relating to the preparation and verification of photomontaged views for the purposes of assessing visual impact

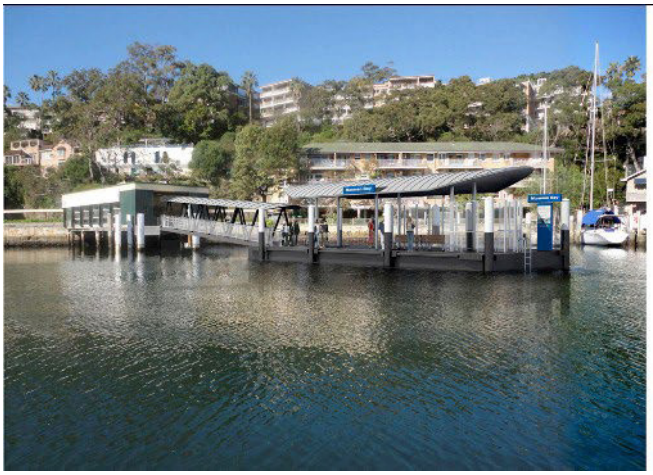
VISUAL IMPACT ASSESSMENTS: A REALITY CHECK.
BY JOHN ASPINALL.

Photomontaged views of new apartment building at Pyrmont: Urbaine

Australia's rapid construction growth over the past 10 years has coincided with significant advances in the technology behind the delivery of built projects. In particular, BIM (Building Information Modelling). Virtual Reality and ever-faster methods of preparing CAD construction documentation.

Alongside these advances, sits a number of potential problems that need to be considered by all of those involved in the process of building procurement. Specifically, the ease with which CAD software creates the appearance of very credible drawn information, often without the thoroughness and deliberation afforded by architects, and others, in years past.

Nowhere is this more apparent than in the area of visual impact assessments, where a very accurate representation of a building project in context is the starting point for discussion on a project's suitability for a site. The consequences of any inaccuracies in this imagery are significant and far- reaching, with little opportunity to redress any errors once a development is approved.



Photomontaged views of new Sydney Harbour wharves: Urbaine

Urbaine Architecture has been involved in the preparation of visual impact studies over a 20 year period, in Australia and Internationally. Urbaine's Director, John Aspinall, has been at the forefront of developing methods of verifying the accuracy of visualisations, particularly in his role as an expert witness in Land and Environment Court cases.

In Urbaine's experience, a significant majority of visualisation material presented to court is inaccurate to the point of being invalid for any legal planning decisions. Equally concerning is the amount of time spent, by other consultants, analysing and responding to this base material, which again can be redundant in light of the frequent inaccuracies. The cost of planning consultant reports and legal advice far exceeds that of generating the imagery around which all the decisions are being made.

Over the last 10 years, advances in 3d modelling and digital photography have allowed many practitioners to claim levels of expertise that are based more on the performance of software than on a rigorous understanding of geometry, architecture and visual perspective. From a traditional architect'straining, prior to the introduction of CAD and 3d modelling, a good understanding of the principles of perspective, light, shadow and building articulation, were taught

throughout the training of architects.

Statutory Authorities, and in particular the Land and Environment Court, have attempted to introduce a degree of compliance, but, as yet, this is more quantitative, than qualitative and is resulting in an outward appearance of accuracy verification, without any actual explanation being requested behind the creation of the work.

Currently, the Land and Environment Court specifies that any photomontages, relied on as part of expert evidence in Class 1 appeals, must show the existing surveyed elements, corresponding with the same elements in the photograph. Often, any surveyed elements can form such a small portion of a photograph that, even by overlaying the surveyed elements as a 3d model, any degree of accuracy is almost impossible to verify. For sites where there are no existing structures, which is frequent, this presents a far more challenging exercise. Below is one such example, highlighted in the Sydney Morning Herald, as an example of extreme inaccuracy of a visual impact assessment. Urbaine was engaged to assess the degree to which the images were incorrect – determined to be by a factor of almost 75%.

Domain

The Sydney Morning Herald

Inaccurate images anger residents

February 21

Kelsey Munro

Picture imperfect ... the original interpretation of how the Lewisham Estates development will look.

CAN residents affected by big development proposals rely on developers' photo montages?

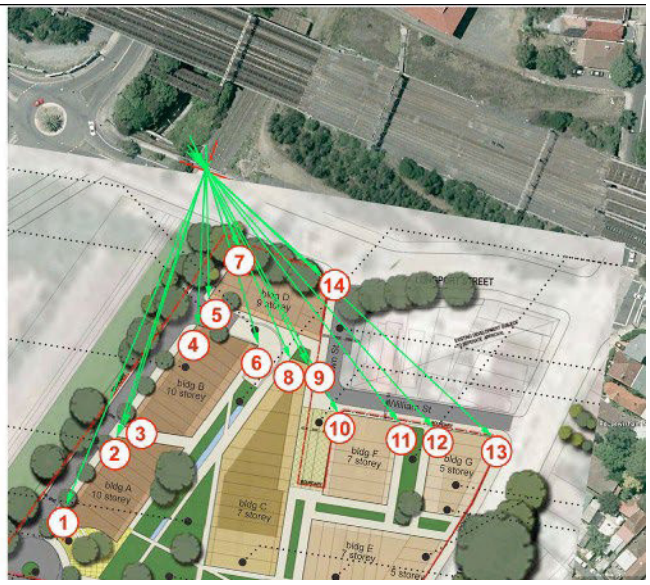
One inner west group thinks not, after inaccuracies were found in a series of digital photo montages which made the proposed Lewisham Estates development appear much smaller than it would if built.

The developer was sent back to the drawing board by the Department of Planning to redo the images that were publicly exhibited for the project after questions were raised over their accuracy.

The corrected interpretation of how the Lewisham Estates development will look.

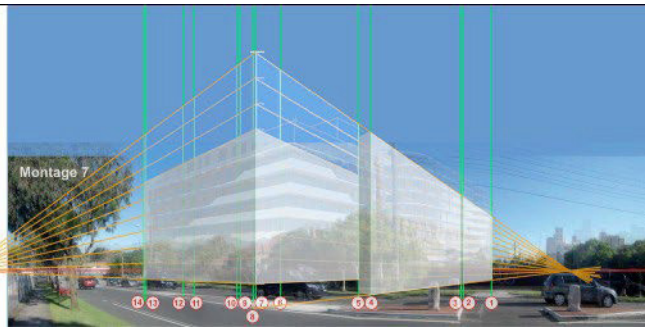
The No Lewisham Towers residents' action group claims the original images were so misleading that the corrected ones should go on public exhibition before the Planning Assessment Commission makes its determination next week.

SMH article re inaccurate visualisations



Key visual location points on site: Urbaine

Photomontage submitted by developer



Assessment of inaccuracy by Urbaine

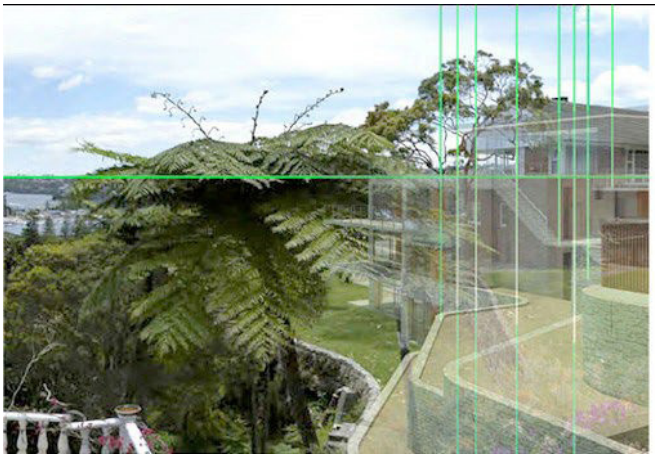
Urbaine has developed a number of methods for adding verification data to the 3d model of proposed buildings and hence to the final photomontages. These include the use of physical site poles, located at known positions and heights around a site, together with drones for accurate height and location verification and the use of landscaped elements within the 3d model to further add known points of references. Elements observed in a photograph can be used to align with the corresponding elements of the new building in plan. If 4 or more known positions can be aligned, as a minimum, there is a good opportunity to create a verifiable alignment.

Every site presents different opportunities for verification and, often, Urbaine is required to assess montages from photographs taken by a third party. In these cases, a combination of assessing aerial photography, alongside a survey will allow reference points to be placed into the relevant 3d model prior to overlaying onto the photos for checking.

The following example clearly demonstrates this – a house montaged into a view, by others, using very few points of reference for verification. By analysing the existing photo alongside the survey, the existing site was able to be recreated with a series of reference elements built into the model. A fully rendered version of all the elements was then placed over the photo and the final model applied to this. As can be seen, the original montage and the final verified version are dramatically different and, in this case, to the disadvantage of the complainant.

Photomontage submitted by developer

Key visual location points on site: Urbaine



Key points and 3d model overlaid onto existing photo

Final accurate photomontage: Urbaine

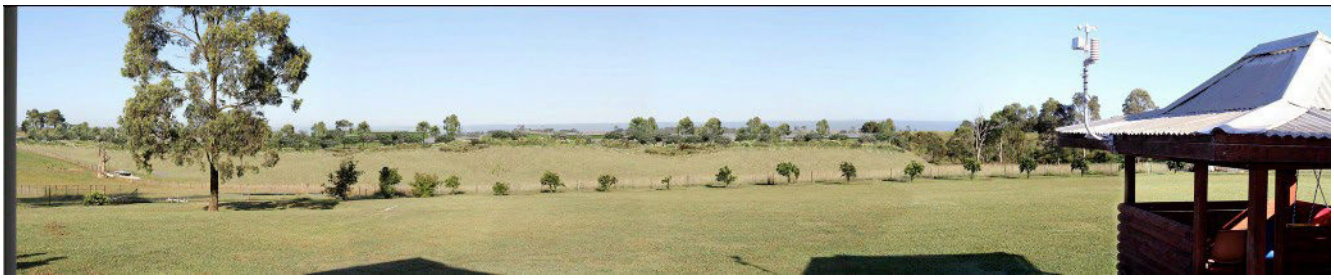
Often, Urbaine's work is on very open sites, where contentious proposals for development will be relying on minimising the visual impact through mounding and landscaping. In these cases, accuracy is critical, particularly in relation to the heights above existing ground levels. In the following example, a business park was proposed on very large open site, adjoining several residential properties, with views through to the Blue Mountains, to the West of Sydney. Urbaine spent a day preparing the site, by placing a number of site poles, all of 3m in height. These were located on junctions of the various land lots, as observed in the survey information. These 3d poles were then replicated in the 3d CAD model in the same height and position as on the actual site. This permitted the buildings and the landscaping to be very accurately positioned into the photographs and, subsequently, for accurate sections to be taken through the 3d model to assess the actual percentage view loss of close and distant views.

Physical 3000mm site poles placed at lot corners

3d poles located in the 3d model and positioned on photo

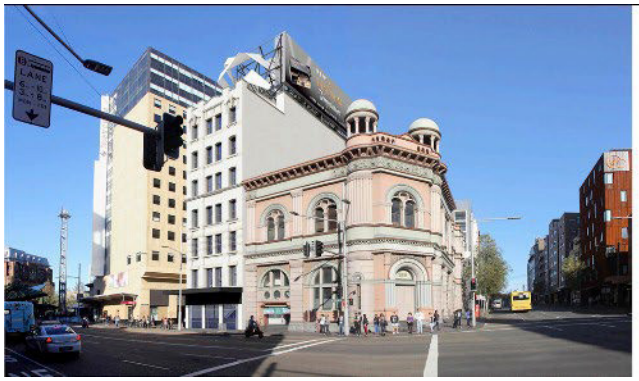
Proposed buildings and landscape mounding applied

Proposed landscape applied – shown as semi-mature

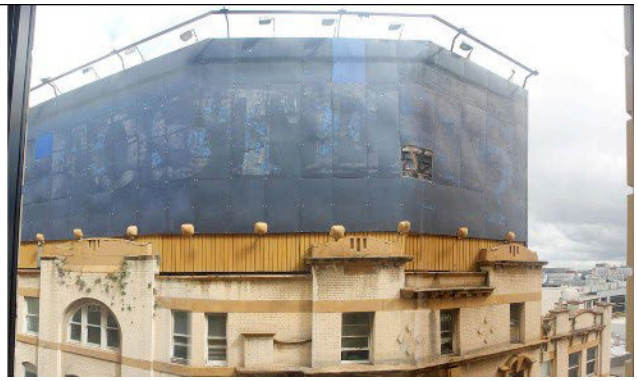


Final verified photomontage by Urbaine

Further examples, below, show similar methods being used to give an actual percentage figure to view loss, shown in red, in these images. This was for a digital advertising hoarding, adjoining a hotel. As can be seen, the view loss is far outweighed by the view gain, in addition to being based around a far more visually engaging sculpture. In terms of being used as a factual tool for legal representation and negotiation, these images are proving to be very useful and are accompanied by a series of diagrams explaining the methodology of their compilation and, hence verifying their accuracy.

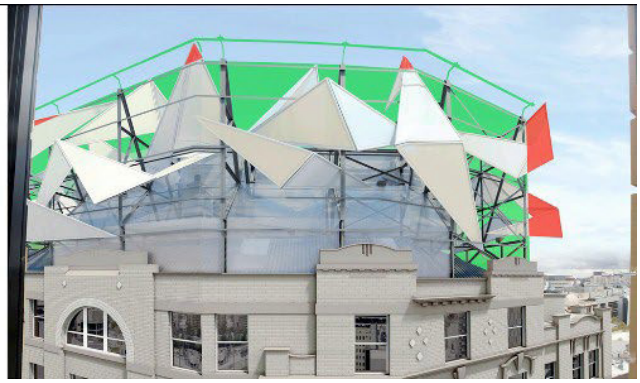


Photomontage of proposed building for digital billboard



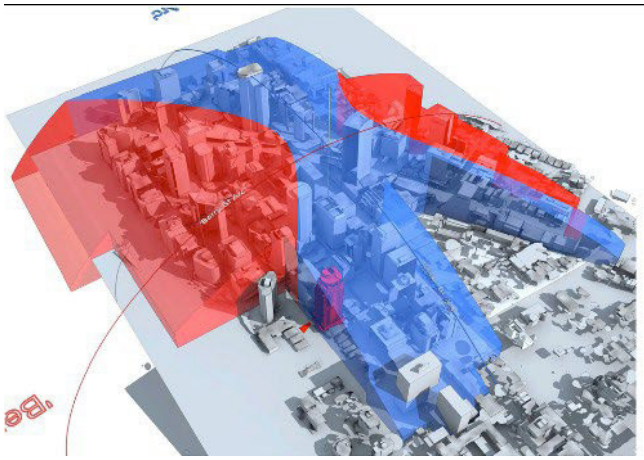
Existing situation – view from adjoining hot

Photomontage of view from hotel

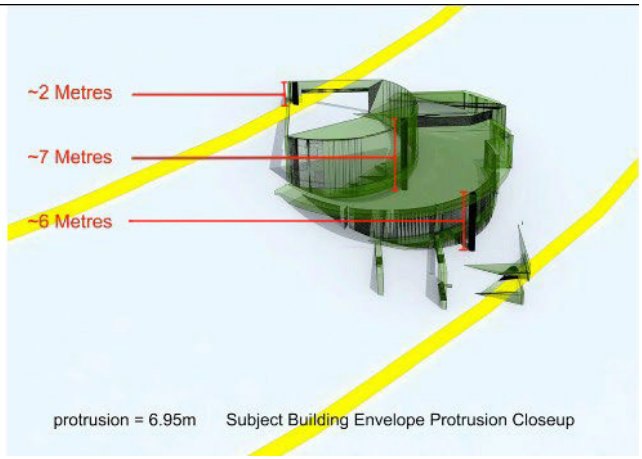


View loss – green = view gain / red = view loss

There are also several areas of assessment that can be used to resolve potential planning approval issues in the early stages of design. In the case below, the permissible building envelope in North Sydney CBD was modelled in 3d to determine if a building proposal would exceed the permitted height limit. Information relating to the amount of encroachment beyond the envelope allowed the architect to re-design the plant room profiles accordingly to avoid any breach.



3d model of planning height zones



Extent of protrusion of proposed design prior to re- design

Urbaine's experience in this field has place the company in a strong position to advise on the verification of imagery and also to assist in developing more robust methods of analysis of such imagery. As a minimum, Urbaine would suggest that anyone engaging the services of

visualisation companies should request the following information, as a minimum requirement:

1. Height and plan location of camera to be verified and clearly shown on an aerial photo, along with the sun position at time of photography.
2. A minimum of 4 surveyed points identified in plan, at ground level relating to elements on the photograph and hence to the location of the superimposed building.
3. A minimum of 4 surveyed height points to locate the imposed building in the vertical plane.
4. A series of images to be prepared to explain each photomontaged view, in line with the above stages.

This is an absolute minimum from which a client can determine the verifiability of a photomontaged image. From this point the images can be assessed by other consultants and used to prepare a legal case for planning approval.

Land and Environment Court
of New South Wales

Policy: Use of Photomontages and Visualisation Tools

Commencement

1. This policy commences on 17 May 2024 and replaces the policy published 21 August 2013.

Purpose of the policy

2. This policy is to guide the preparation of photomontages, still images, video images, and other visualisation tools to depict the development in an appeal under the *Environmental Planning and Assessment Act 1979*, to ensure that the data they present is represented and interpreted accurately, and that their use would assist the Court in determining the appeal.

Application

3. The policy applies to appeals under the EPA Act, where photomontages or other visual tools are to be submitted as part of expert evidence.

Definitions

4. In this Policy:

   Appeal means an appeal to the Court under the EPA Act.

   CGI means Computer Generated Image.

   Commissioner means a Commissioner or Acting Commissioner of the Court.

   Court means the Land and Environment Court of New South Wales.

   Development means the development for which consent is sought in the development application that is the subject of the appeal.

   EPA Act means the *Environmental Planning and Assessment Act 1979*.

Existing Image means an unchanged or unaltered image of the location, viewing angle and approximate conditions on which the proposed development will be overlaid, to convey the issues in dispute.

Judge means a Judge of the Court.

Photomontages means, for the purpose of this policy, any visual tool or aid, whether still image, video, computer generated image, two dimensional (2D) or three dimensional (3D) or other visual means to depict development plans.

Registrar means a Registrar of the Court.

RL Reduced Level or Relative Level as defined in Australian Standard® AS1100 Technical Drawings.

General principles

5. A photomontage submitted in an appeal should provide to the Judge, Commissioner or Registrar the most accurate visual images of the development in its real-world location, so as to specifically convey the issues in dispute.

6. A photomontage must include:

   6.1 the existing image;

   6.2 a 2D plan and/or elevation showing the location of the camera, target point/viewing angle, and lighting source that corresponds to the location from where the existing image was taken; and

   6.3 the proposed built envelope and key features of the development overlaid on the existing image in the form of a wire frame and/or ‘block massing’ model to demonstrate the development.

7. Where a photorealistic CGI of the development is used:

   7.1 the metadata from the existing image to create an identical 3D computer generated camera should be provided;

   7.2 the environmental conditions of the CGI should be set to the same parameters as the existing image;

   7.3 colour matching in the CGI is to correspond with the existing image; and

7.4 the details of the software used in creating the CGI should be stated as part of the submission of the photomontage.

8. A detailed summary of the methodology used to create the photomontage should be provided, including:

8.1 survey data that is used to create the photomontages, including the name and qualifications of the surveyor who prepared the survey information from which the underlying data for the wire frame was obtained;

8.2 site specific topographical data used to create the photomontages, including the source and references utilised for the topographical data (for example paper, or survey inputs from file types such as from 'DWG' or 'DXF');

8.3 the camera type, lens, focal length or field of view, and sensor used for the purpose of the photograph from which the existing image has been derived;

8.4 accurate location, alignment and direction of the camera (whether fixed on tripod or drone) and RL of the camera for the existing image;

8.5 data that was used to prepare the photomontages, such as:

8.5.1 use of relevant plans and data for the depiction of existing buildings or existing elements as shown in the wire frame, block massing model or photorealistic CGI;

8.5.2 the means by which terrain has been generated (such as surveyed spot levels and/or contours or by some form of point cloud, or Ground Control Point survey method);

8.5.3 any variables applied to the images such as, time of day, lighting and weather conditions;

8.5.4 consistency in application of scale and interpretation of the relevant data;

8.5.5 rationale for selecting a particular view, use of camera lens or conditions in creating the image. For example, in circumstances where a development is best depicted with an expanded field of view or panoramic view, the type of panorama head and equipment must be stated, in addition to the data above.

8.6 where a photomontage has used more than one baseline image to represent the existing context (that is where multiple images are 'stitched together'), this must be stated, and the requirements above should be adapted to convey the key data required to verify its accuracy; and

8.7 whether any editing software or other visual manipulation has been used in the preparation of the final image, for example an adjustment in contrast, saturation, tilt shift or the like.

Visualisation Tools

9. As technology emerges, the principles outlined above are to be applied. What is important is that the Court has an unaltered and real life baseline, summary of metadata so the veracity of imagery presented can be verified, and application of relevant overlays of the proposed development that assists in the Court's consideration of the real issues in dispute.

10. All effort is to be made and the 'best practices' are to be applied when utilising technology for the purposes of visualisation of the development to ensure accuracy and avoid bias of information interpretation.

Paperless Hearings

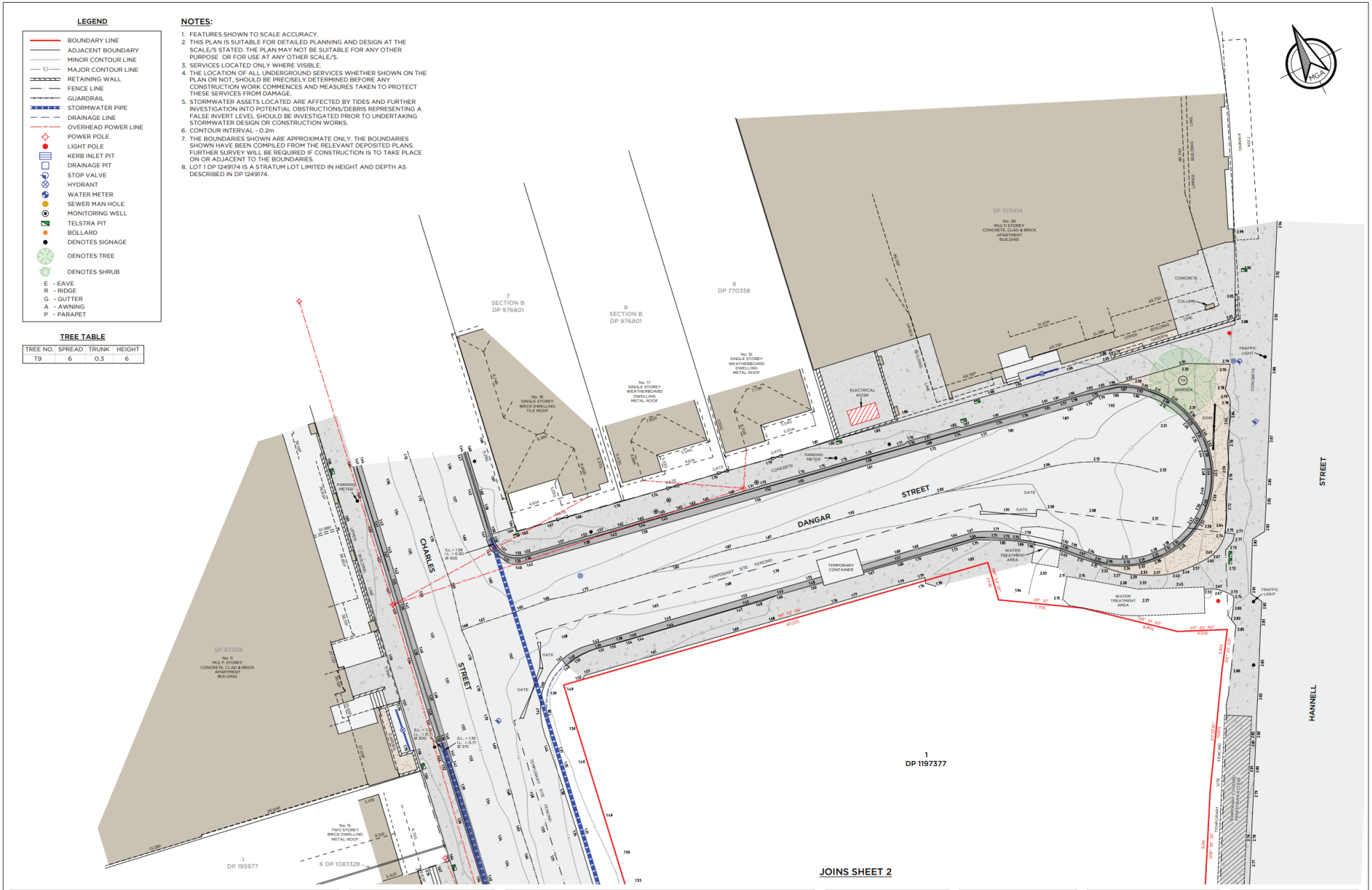
11. Parties should be prepared to display the photomontage electronically if it is to be relied upon, or be the subject of an examination of an expert witness.

12. It will be the responsibility of the party whose expert is being examined, to provide a device compatible with courtroom technology which can display the photomontage electronically. This will allow the presiding officer, the experts, lawyers and all other people to be able to see in real time and on a common image, the subject of the examination.

Issued by:

The Honourable Justice Brian J Preston
Chief Judge – Land and Environment Court of NSW
Date: 17 May 2024

5.2. APPENDIX C: Survey and camera positions



REV.	DATE	AMENDMENT(S)	SUR	DFT	CHK
A	06.03.26	ORIGINAL ISSUE	DL	JD	PM

DELFS LASCELLES
CONSULTING SURVEYORS
260 MAITLAND ROAD, MAYFIELD NSW 2304
ABN: 28 164 260 100
T: (02) 4964 4986
E: admin@delacs.com.au
delacs.com.au

DETAIL SURVEY OF STREETS ADJACANT TO LOT 1 DP1197377

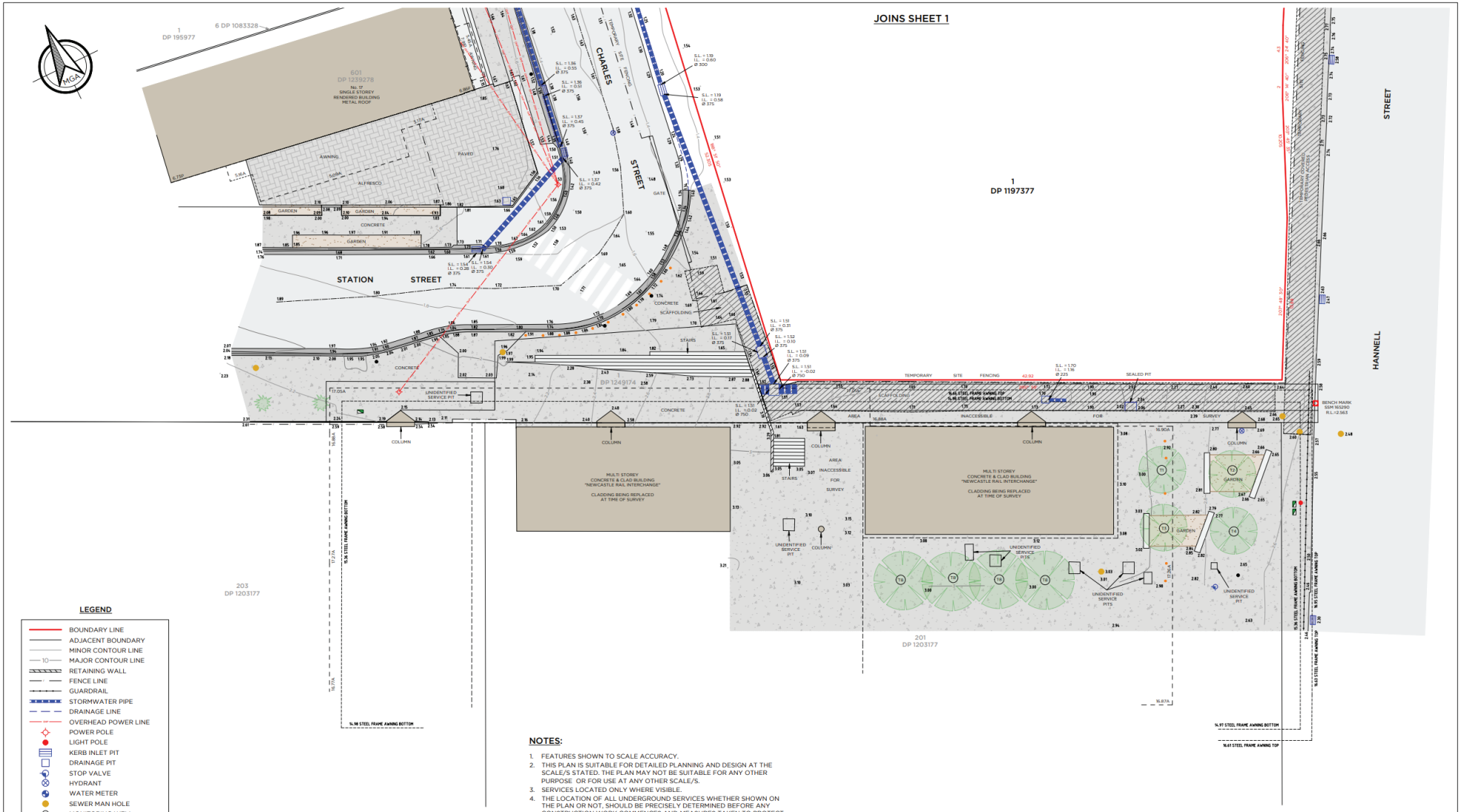
SITE ADDRESS:
10 DANGAR STREET
WICKHAM

CLIENT:
URBAN PROPERTY GROUP

CAD REF: 22033_DET

POSITION DATUM:	SSM 165290
ORIENTATION:	MGA 2020 (GND)
EASTING:	384 050.592
NORTHING:	6 356 435.625
CLASS: C	PU: 0.02
HEIGHT DATUM:	SSM 165290
CLASS: LC	PU: -
RL: 2.563 (AHD)	DATE: 17.02.26

SURVEYED	DRAFTED	CHECKED
DL	JD	PM
SCALE	PAGE SIZE	DATE
1:150	A1	20.02.26
SHEET	REV.	PROJECT No.
1/2	A	22033



LEGEND

- BOUNDARY LINE
- ADJACENT BOUNDARY
- MINOR CONTOUR LINE
- MAJOR CONTOUR LINE
- RETAINING WALL
- FENCE LINE
- GUARDRAIL
- STORMWATER PIPE
- DRAINAGE LINE
- OVERHEAD POWER LINE
- POWER POLE
- LIGHT POLE
- KERB INLET PIT
- DRAINAGE PIT
- STOP VALVE
- HYDRANT
- WATER METER
- SEWER MAN HOLE
- MONITORING WELL
- TELSTRA PIT
- BOLLARD
- DENOTES SIGNAGE
- DENOTES TREE
- DENOTES SHRUB

E - EAVE
R - RIDGE
G - GUTTER
A - AWNING
P - PARAPET

TREE TABLE

TREE NO.	SPREAD	TRUNK	HEIGHT
T1	4	0.2	5
T2	4	0.2	5
T3	4	0.2	5
T4	4	0.2	5
T5	5	0.3	8
T6	5	0.3	8
T7	5	0.3	8
T8	5	0.3	8

NOTES:

1. FEATURES SHOWN TO SCALE ACCURACY.
2. THIS PLAN IS SUITABLE FOR DETAILED PLANNING AND DESIGN AT THE SCALE/S STATED. THE PLAN MAY NOT BE SUITABLE FOR ANY OTHER PURPOSE OR FOR USE AT ANY OTHER SCALE/S.
3. SERVICES LOCATED ONLY WHERE VISIBLE.
4. THE LOCATION OF ALL UNDERGROUND SERVICES WHETHER SHOWN ON THE PLAN OR NOT, SHOULD BE PRECISELY DETERMINED BEFORE ANY CONSTRUCTION WORK COMMENCES AND MEASURES TAKEN TO PROTECT THESE SERVICES FROM DAMAGE.
5. STORMWATER ASSETS LOCATED ARE AFFECTED BY TIDES AND FURTHER INVESTIGATION INTO POTENTIAL OBSTRUCTIONS/DEBRIS REPRESENTING A FALSE INVERT LEVEL SHOULD BE INVESTIGATED PRIOR TO UNDERTAKING STORMWATER DESIGN OR CONSTRUCTION WORKS.
6. CONTOUR INTERVAL - 0.2m
7. THE BOUNDARIES SHOWN ARE APPROXIMATE ONLY. THE BOUNDARIES SHOWN HAVE BEEN COMPILED FROM THE RELEVANT DEPOSITED PLANS. FURTHER SURVEY WILL BE REQUIRED IF CONSTRUCTION IS TO TAKE PLACE ON OR ADJACENT TO THE BOUNDARIES.
8. LOT 1 DP 1249174 IS A STRATUM LOT LIMITED IN HEIGHT AND DEPTH AS DESCRIBED IN DP 1249174.

REV.	DATE	AMENDMENT(S)	SUR	DFT	CHK
A	06.03.26	ORIGINAL ISSUE	DL	JD	PM

DELFS LASCELLES
CONSULTING SURVEYORS
260 MAITLAND ROAD, MAYFIELD NSW 2304
ABN: 28 164 260 100
T: (02) 4964 4886
E: admin@delacs.com.au
delacs.com.au

DETAIL SURVEY OF STREETS ADJACANT TO LOT 1 DP1197377

SITE ADDRESS:
10 DANGAR STREET
WICKHAM

CLIENT:
URBAN PROPERTY GROUP

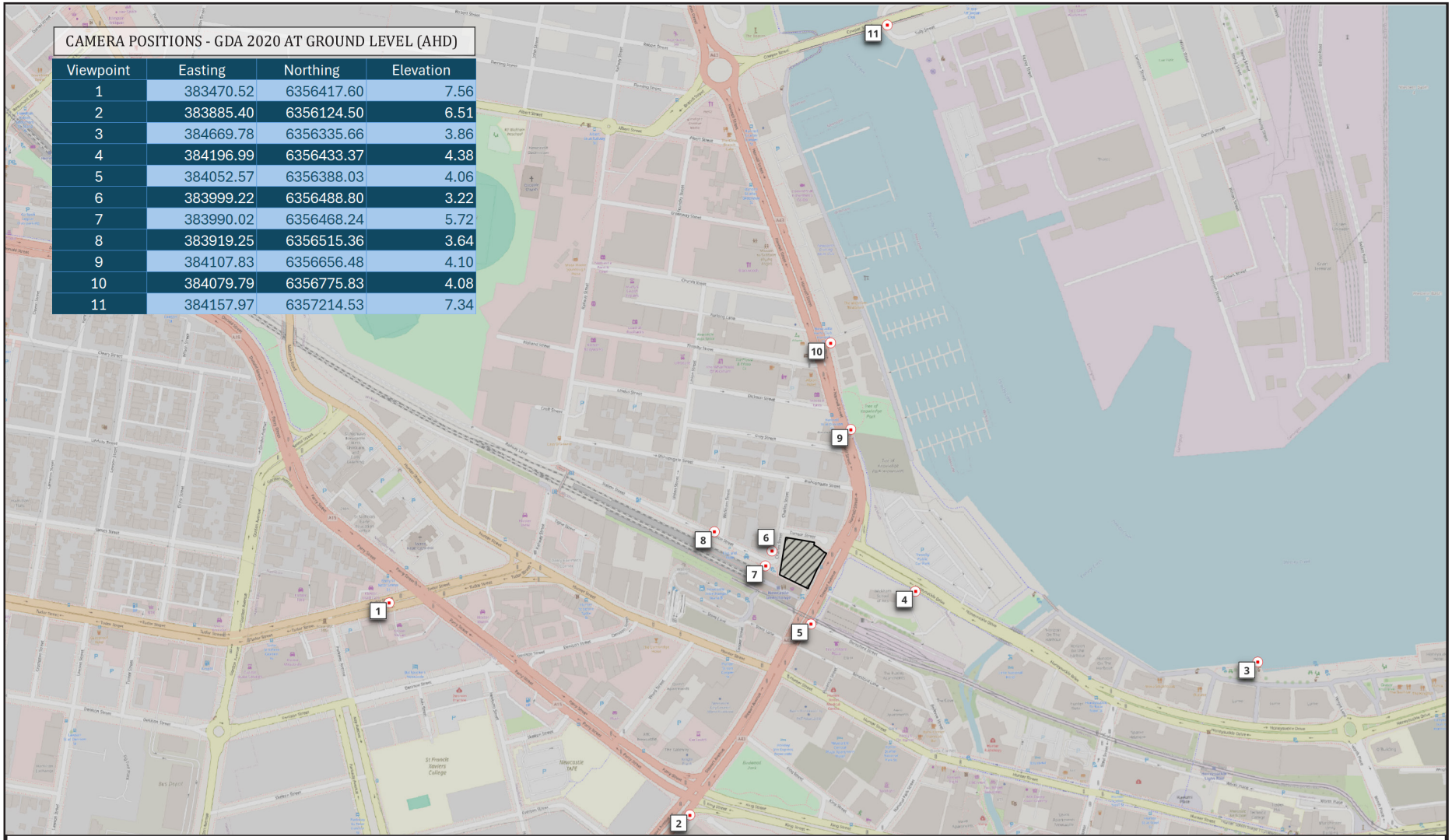
CAD REF: 22033_DET

POSITION DATUM:	SSM 165290
ORIENTATION:	MGA 2020 (GND)
EASTING:	384 050.592
NORTHING:	6 356 435.625
CLASS: C	PU: 0.02
HEIGHT DATUM:	SSM 165290
CLASS: LC	PU: -
RL: 2.563 (AHD)	DATE: 17.02.26

SURVEYED	DRAFTED	CHECKED
DL	JD	PM
SCALE	PAGE SIZE	DATE
1:150	A1	20.02.26
SHEET	REV.	PROJECT No.
2/2	A	22033

CAMERA POSITIONS - GDA 2020 AT GROUND LEVEL (AHD)

Viewpoint	Easting	Northing	Elevation
1	383470.52	6356417.60	7.56
2	383885.40	6356124.50	6.51
3	384669.78	6356335.66	3.86
4	384196.99	6356433.37	4.38
5	384052.57	6356388.03	4.06
6	383999.22	6356488.80	3.22
7	383990.02	6356468.24	5.72
8	383919.25	6356515.36	3.64
9	384107.83	6356656.48	4.10
10	384079.79	6356775.83	4.08
11	384157.97	6357214.53	7.34



NOTE:

BUILDING POSITIONS ARE INDICATIVE FOR PRESENTATION PURPOSES.
DATA WAS CAPTURED USING GNSSS RTK ROVER

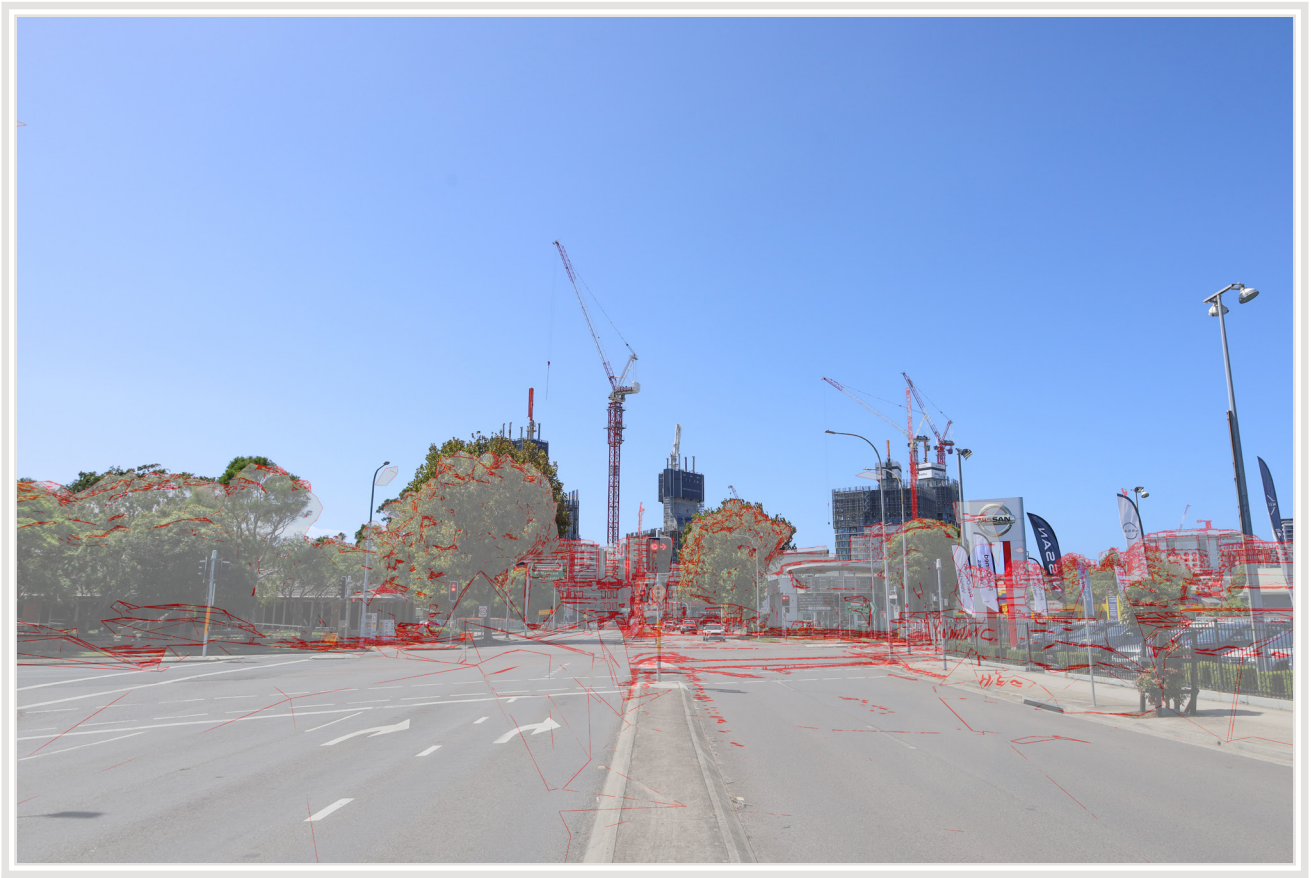
CAMERA POSITIONS ARE FROM GNSS WITH NTRIP CORRECTIONS OBSERVATIONS WITHIN +/- 0.01M.
LEVELS ARE BASED ON AUSTRALIAN HEIGHT DATUM (AHD)

JOB NO: 823 UBN_Dangar	LGA: NEWCASTLE CITY COUNCIL
DATE: 07.10.2025	DATUM: AHD
DRAWN: DK	SCALE: N/A
CHECK: JA	SHEET: 1:1

SKETCH PLAN SHOWING
INDICATIVE CAMERA POSITIONS FOR -
10 DANGAR STREET WICKHAM 2293

urbaine DESIGN GROUP

5.3. APPENDIX D: Wireframe images



Viewpoint 01

Viewpoint 02

urbaine DESIGN GROUP

Viewpoint 03

Viewpoint 04

Viewpoint 05

Viewpoint 06

Viewpoint 07

Viewpoint 08

Viewpoint 09

Viewpoint 10

Viewpoint 11

5.4. APPENDIX E: Site Photography


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
23
24

urbaine DESIGN GROUP

Camera 01

Camera 02

Camera 03

Camera 04

Camera 05

Camera 06

Camera 07

Camera 08

urbaine DESIGN GROUP

Camera 09

Camera 10

Camera 11

Camera 12

Camera 13

Camera 14

Camera 15

Camera 16

Camera 17

Camera 18

Camera 19

Camera 20

Camera 21

Camera 22

Camera 23

Camera 24

Camera 25

Camera 26

Camera 27

Camera 28

Camera 29

Camera 30