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

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DESIGN GROUP

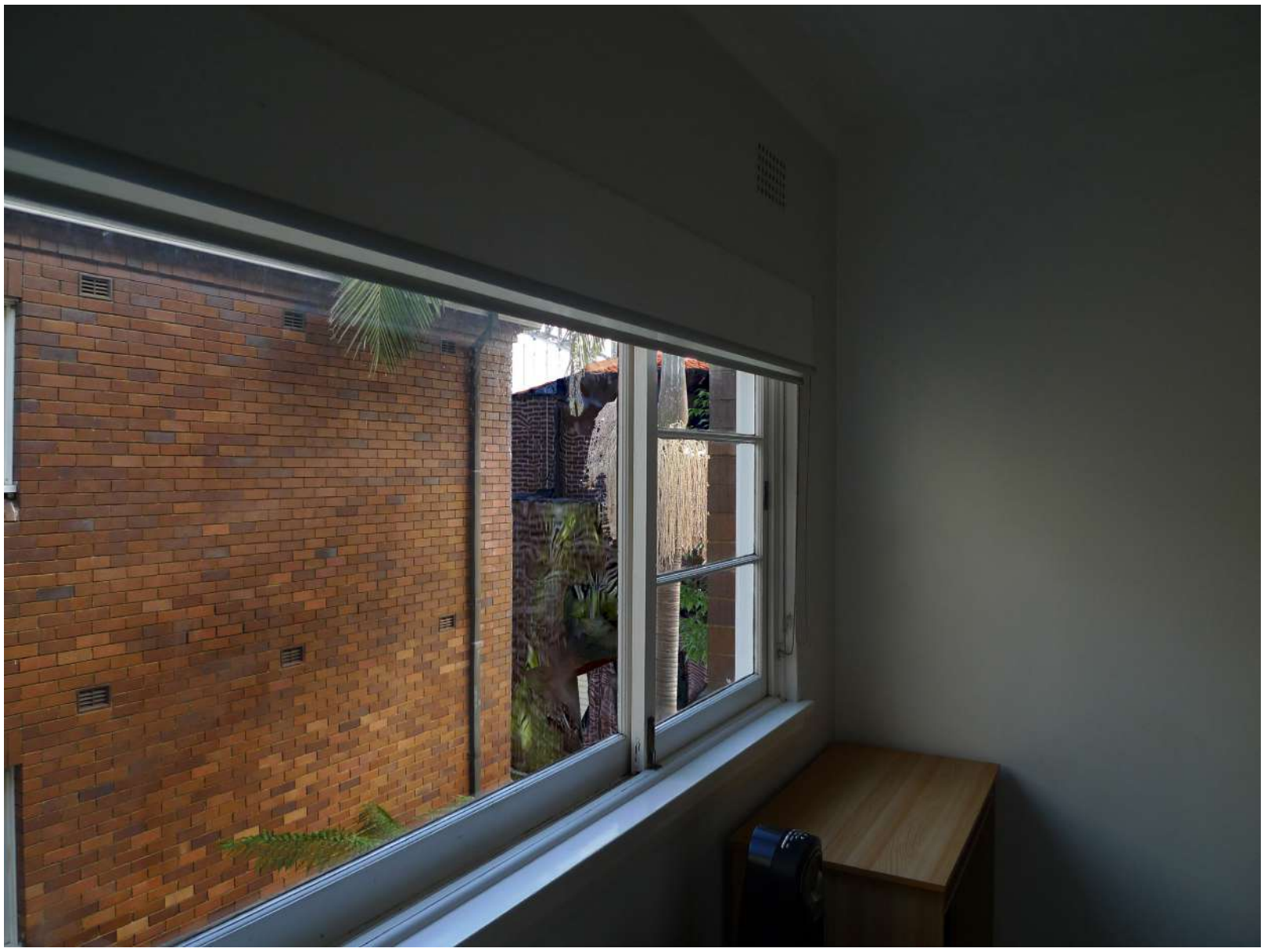
APPENDIX A - VISUAL IMPACT IMAGES

2 WARUDA ST, KIRRIBILLI NSW 2061

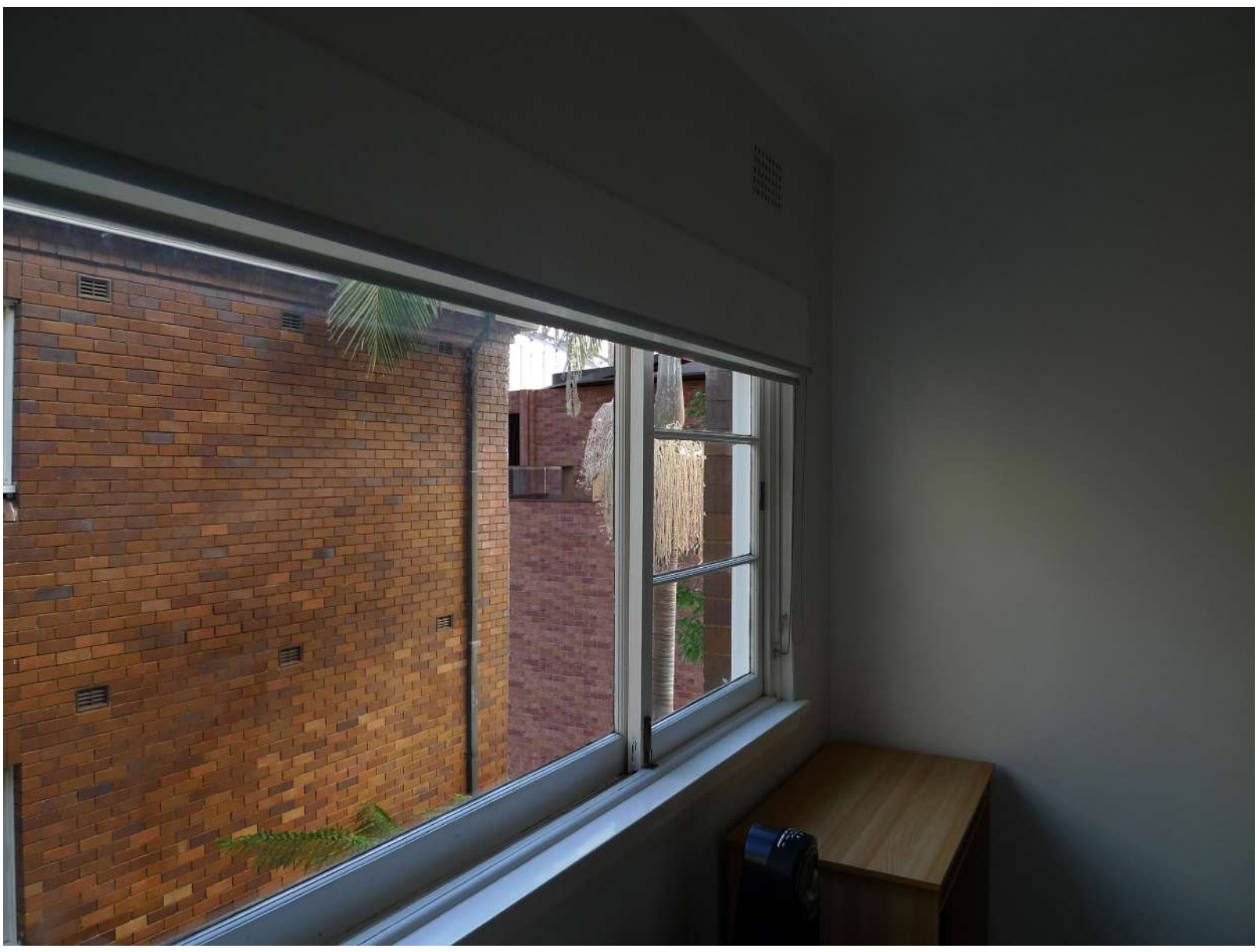
SEPTEMBER 4, 2025

Camera positions map

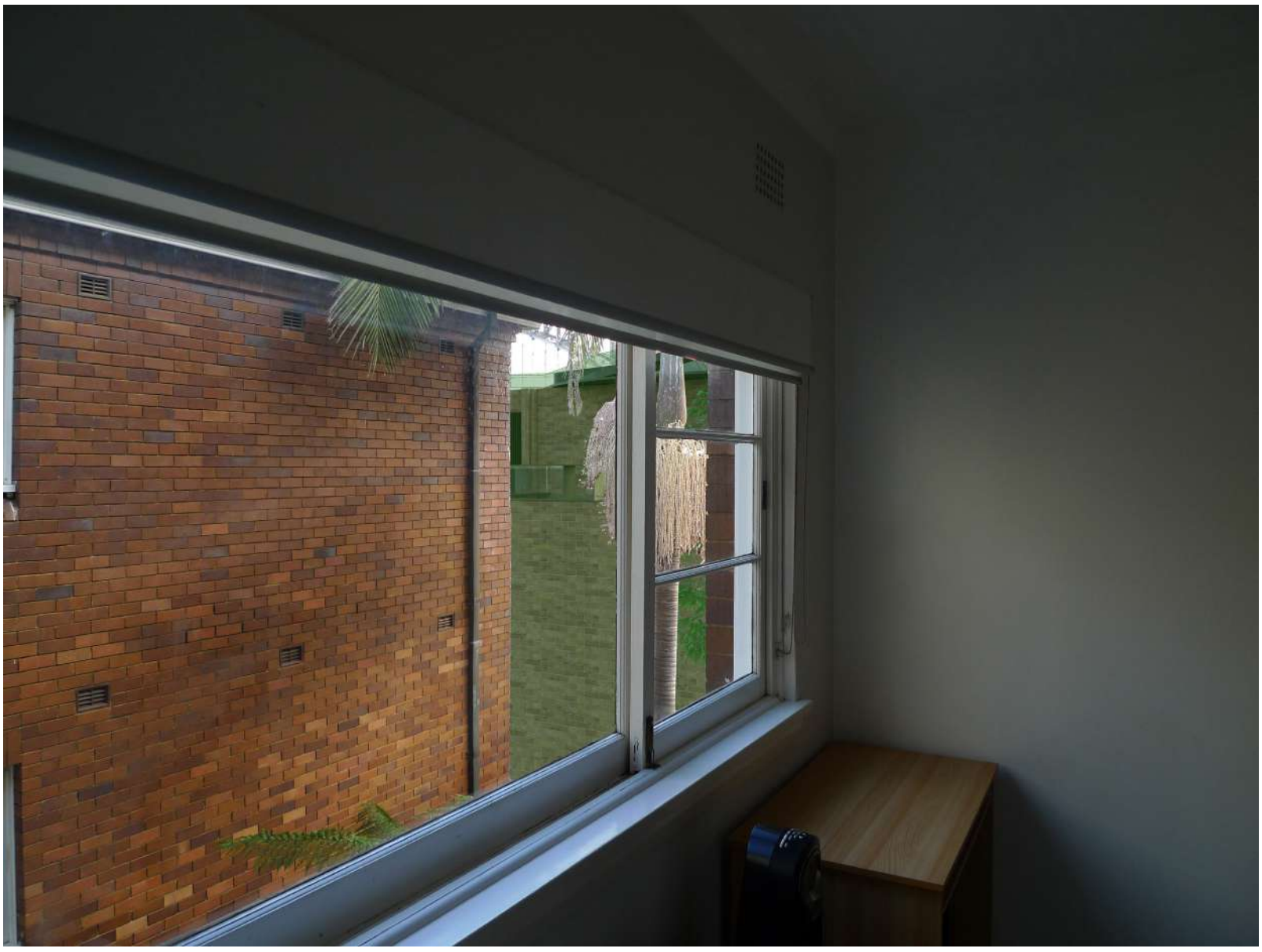
VIEWPOINT 01 - 4/79 Kirribilli Ave - Bed 2



Photomontage of Approved D.A



Photomontage of proposal



Photomontage of proposal - Building height plane with setback applied in green overlay

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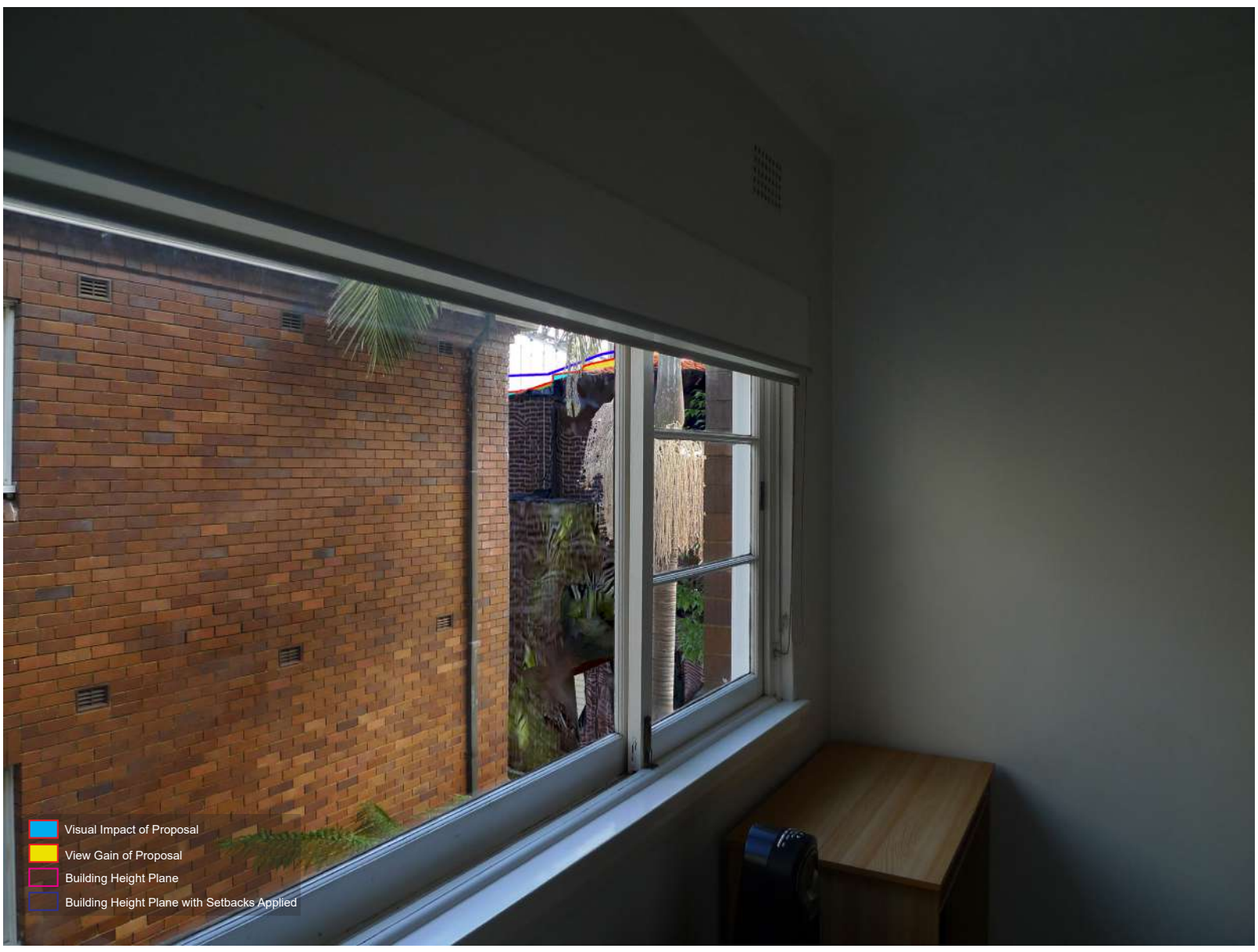
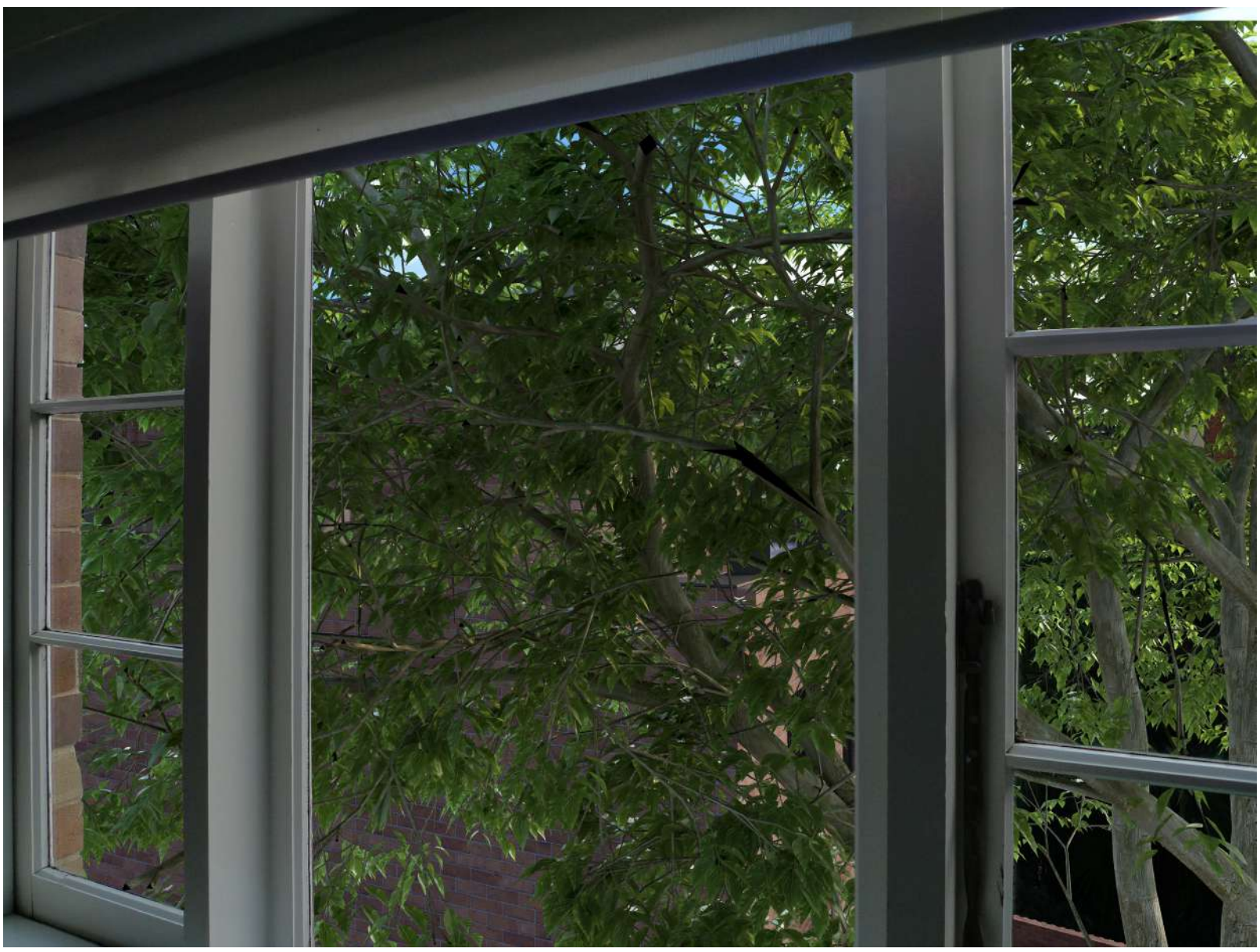


Visual impact of proposal

VIEWPOINT 02 - 4/79 Kirribilli Ave - Bed 1

Photomontage of Approved D.A



Photomontage of proposal

Photomontage of proposal - Building height plane with setback applied in green overlay

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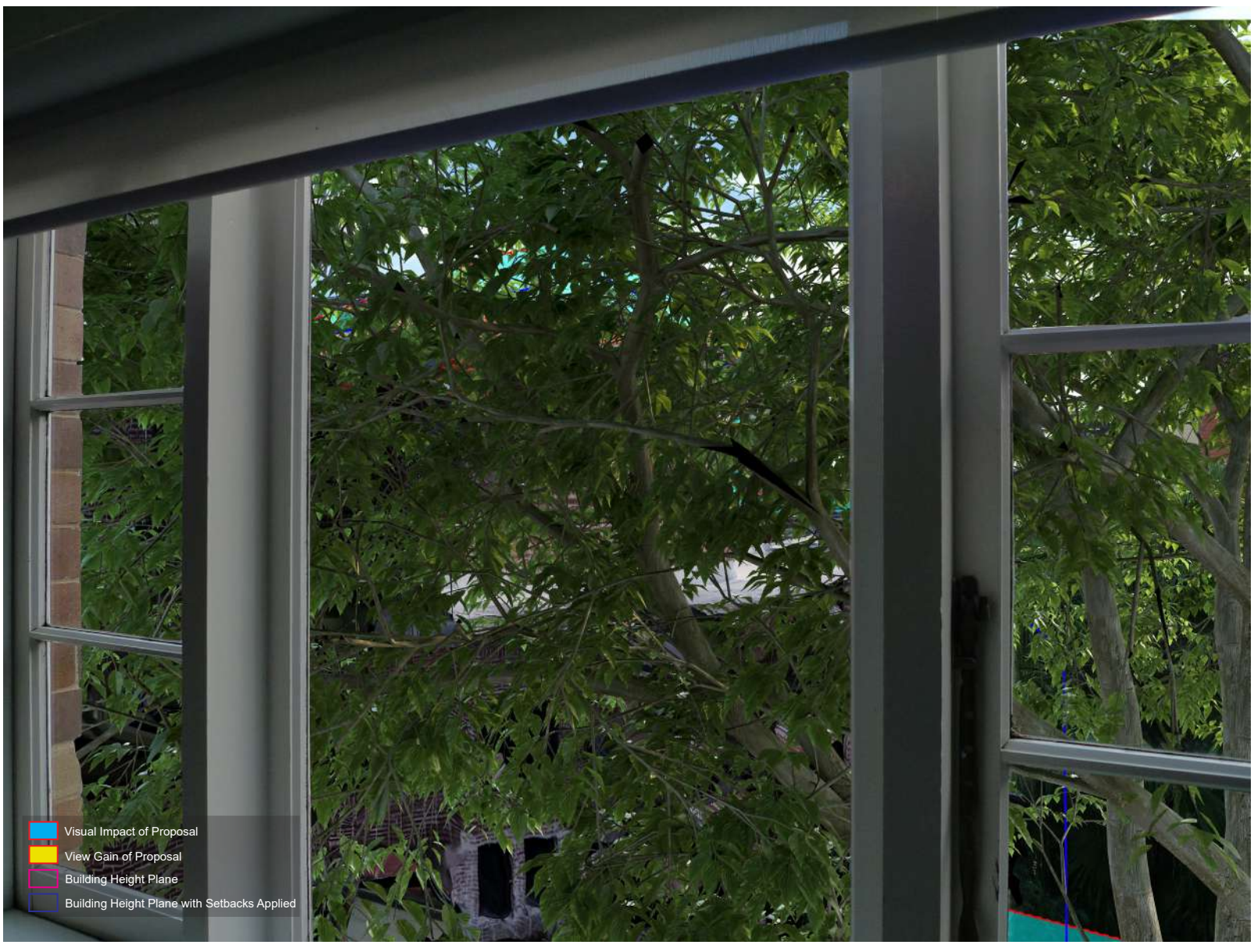
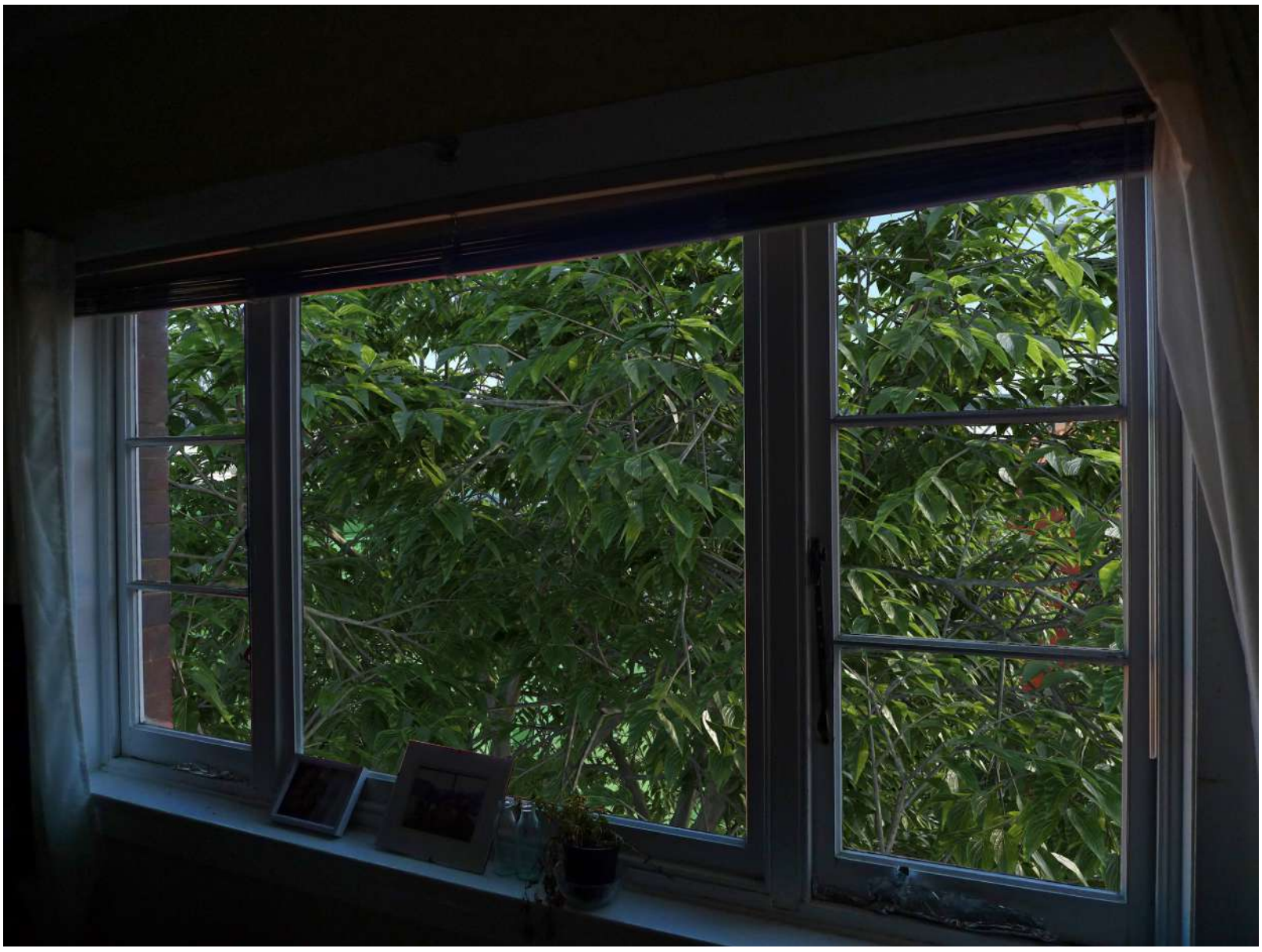


Visual impact of proposal

VIEWPOINT 03 - 6/79 Kirribilli Ave

Photomontage of Approved D.A

Photomontage of proposal - (unseen)



Photomontage of proposal - Building height plane with setback applied in green overlay

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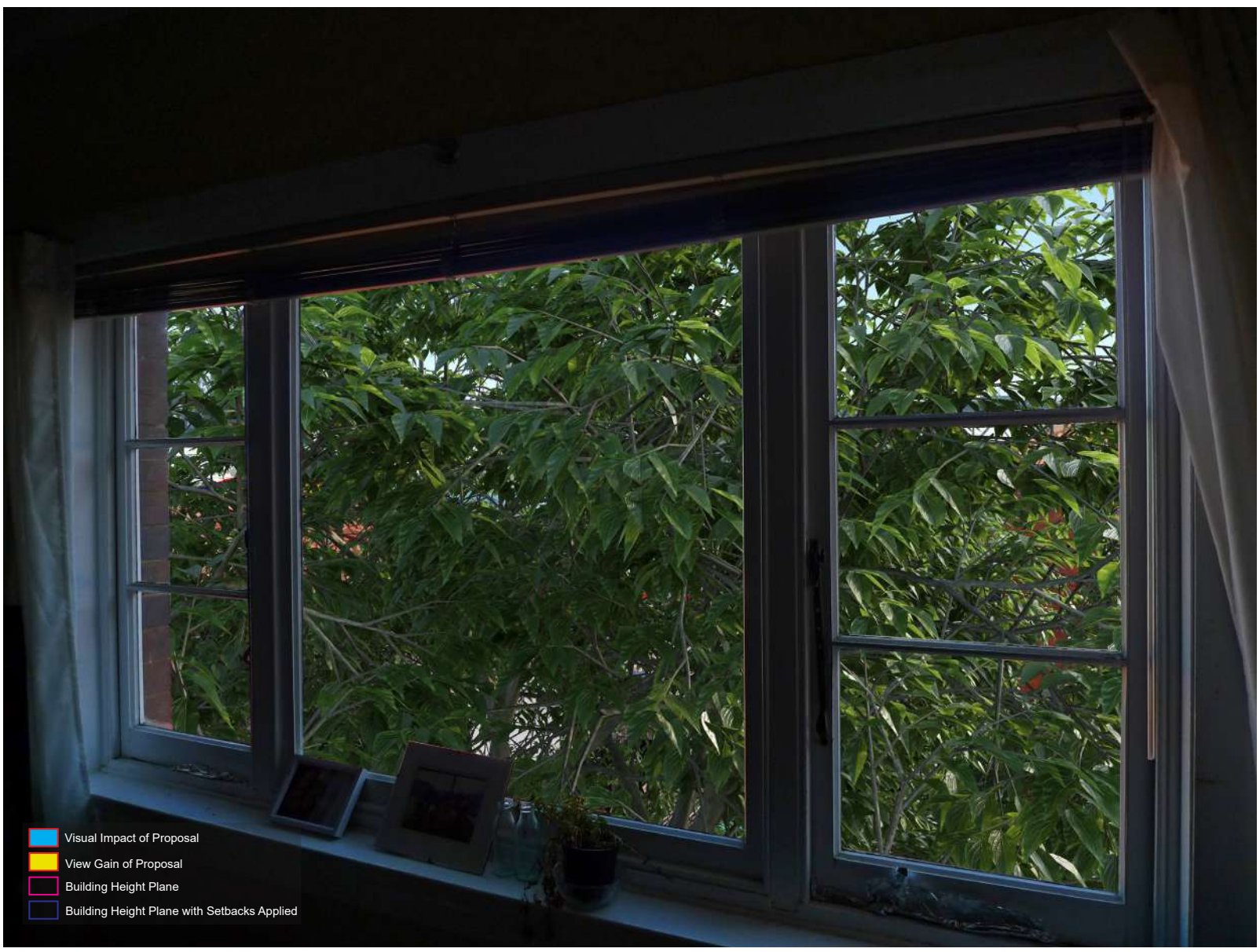

Visual impact of proposal

Photomontage of Approved D.A - (unseen)

Photomontage of proposal - (unseen)

Photomontage of proposal - Building height plane with setback applied in green overlay

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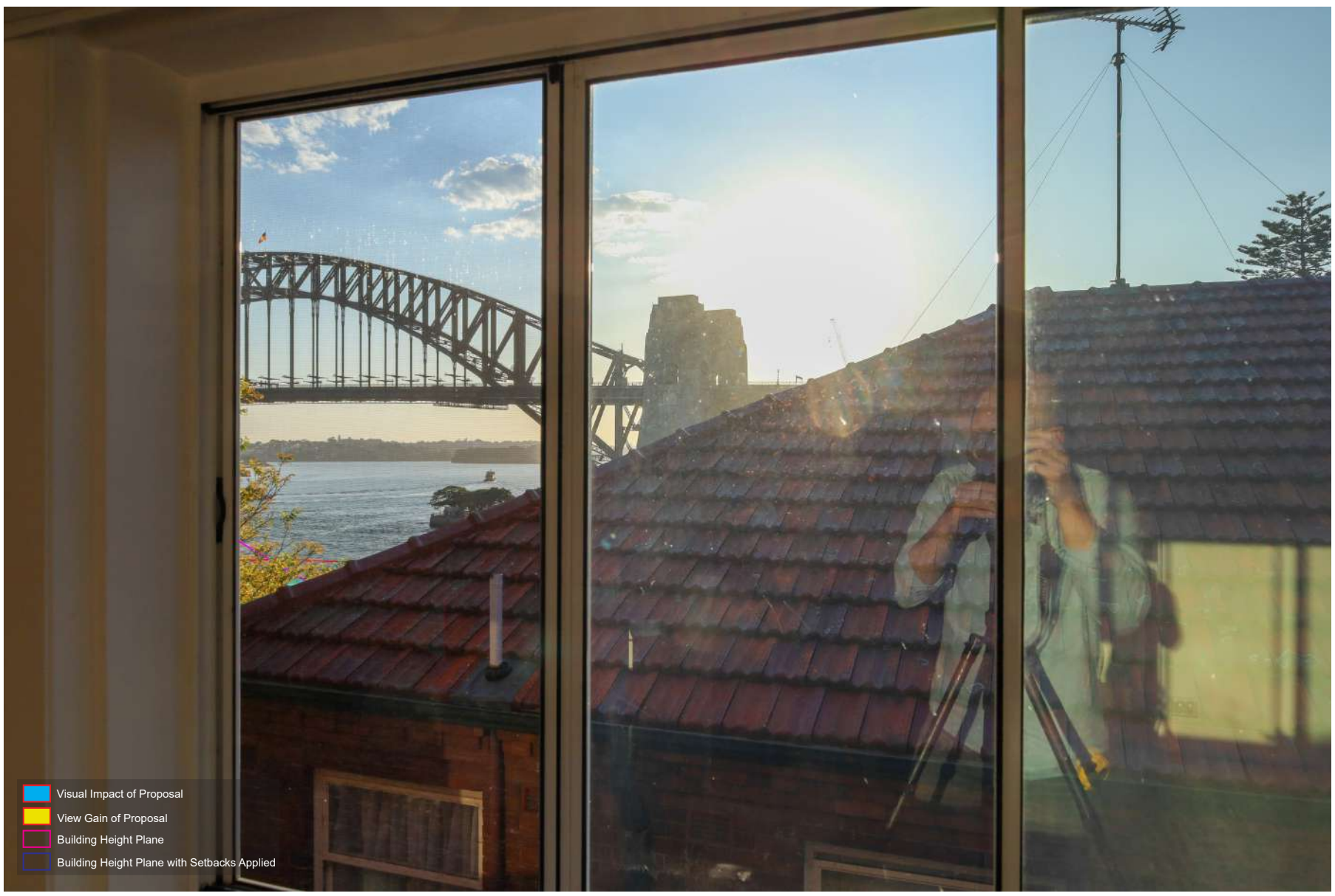

Visual impact of proposal

Photomontage of Approved D.A

Photomontage of proposal

Photomontage of proposal - Building height plane with setback applied in green overlay

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Visual impact of proposal

VIEWPOINT 06 - 7/4 Waruda St - Living Room

Photomontage of Approved D.A

Photomontage of proposal

Photomontage of proposal - Building height plane with setback applied in green overlay

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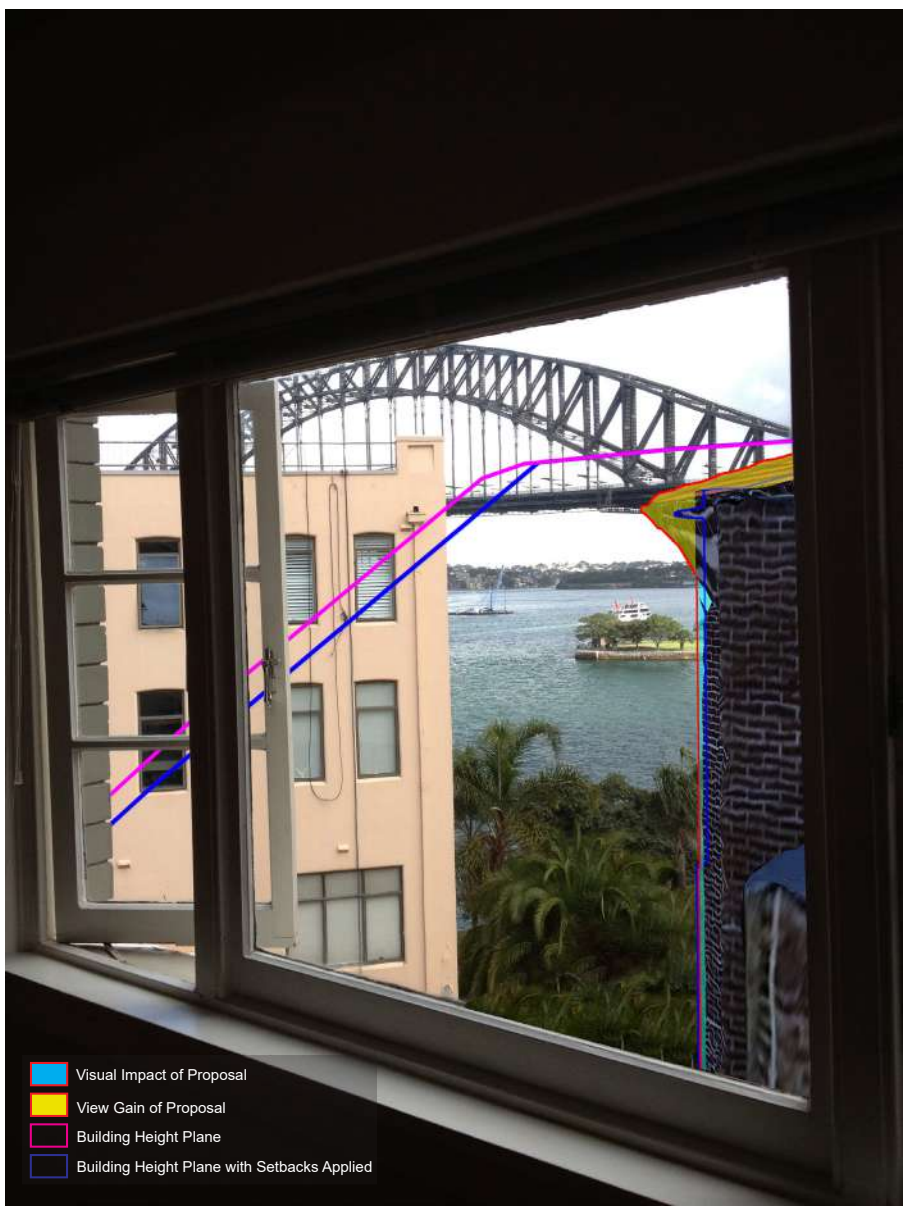
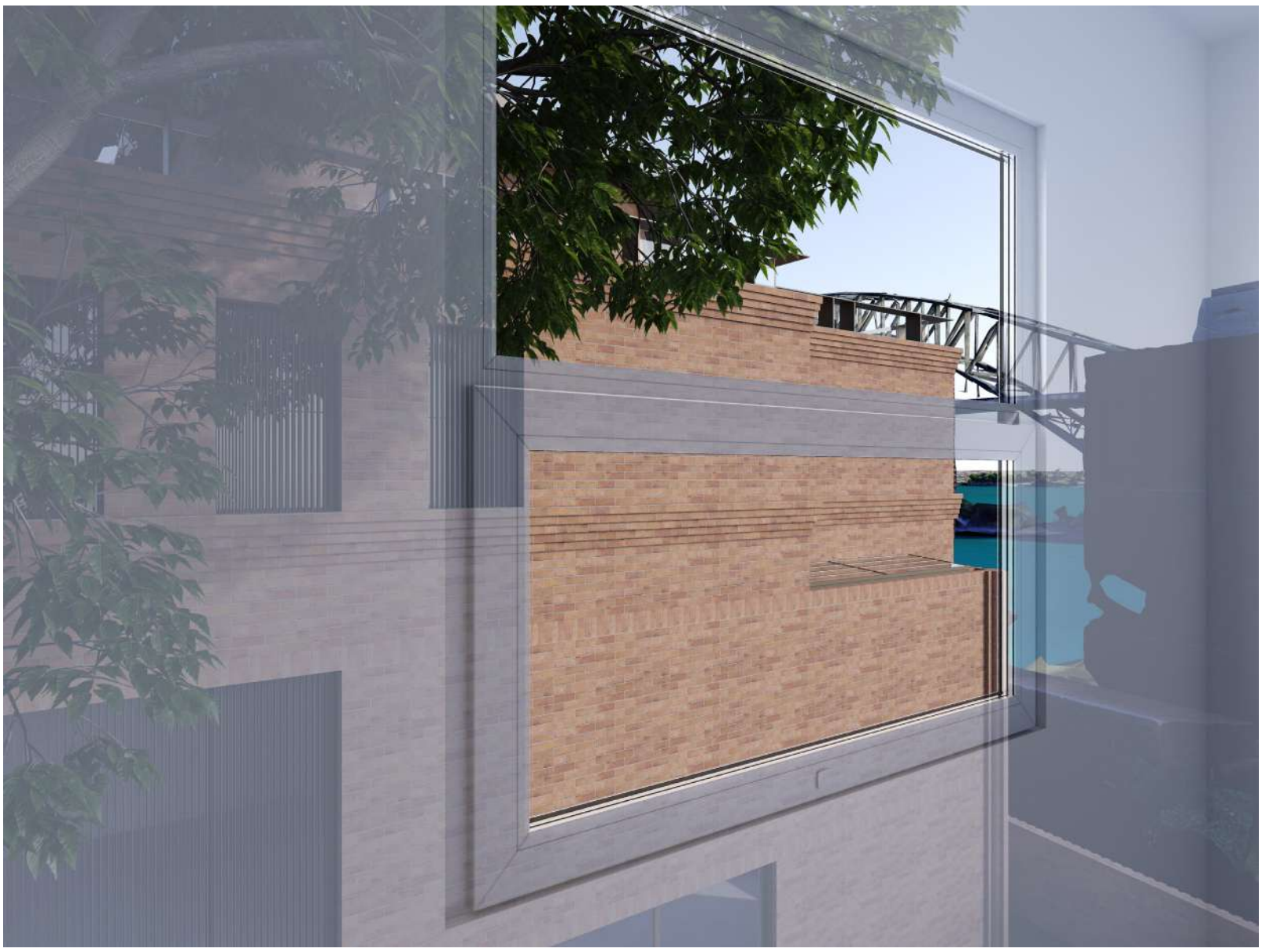


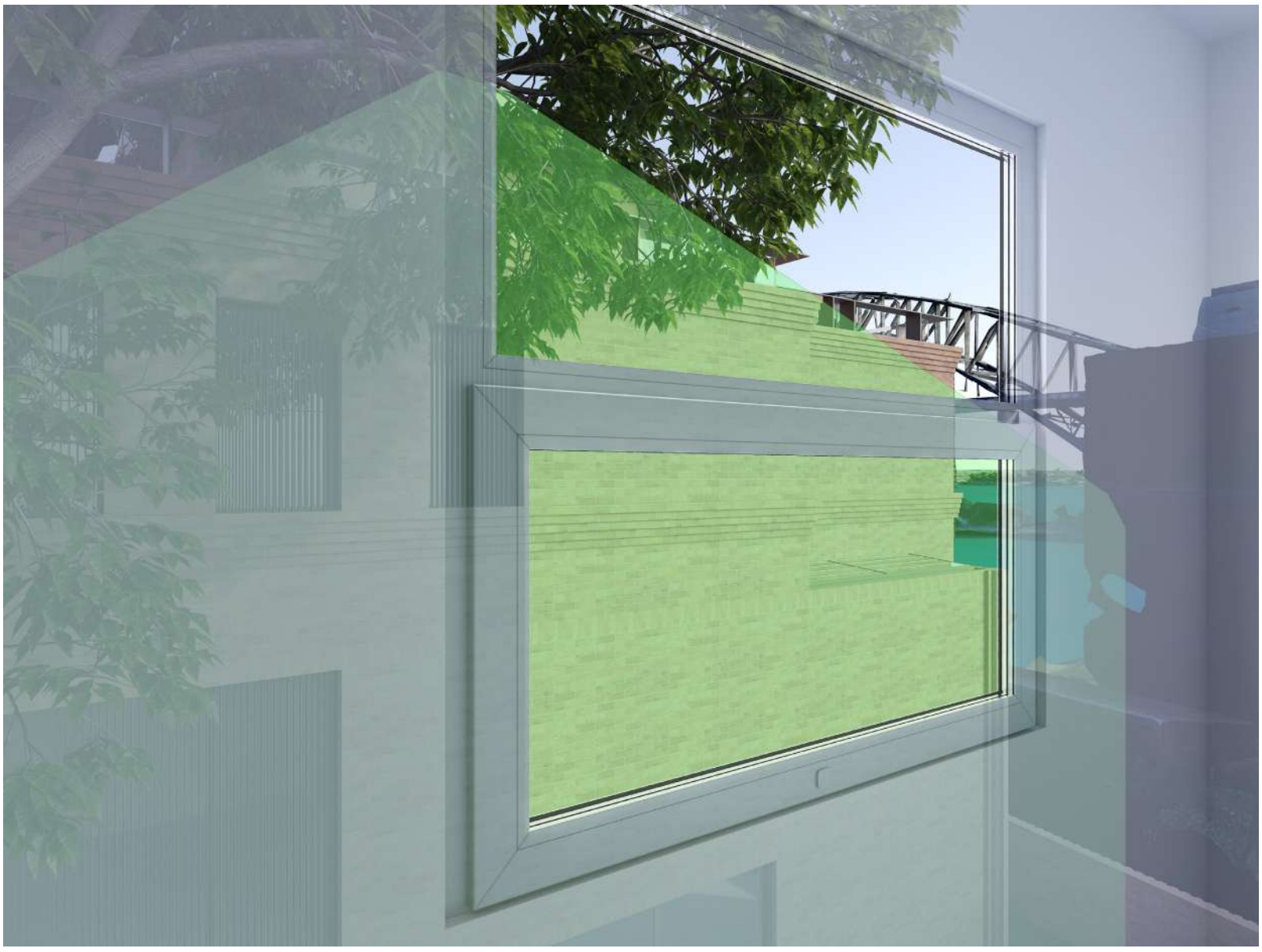
Visual impact of proposal

VIEWPOINT 07 - 3/77 Kirribilli Ave - Kitchen

Photomontage of Approved D.A



Photomontage of proposal



Photomontage of proposal - Building height plane with setback applied in green overlay

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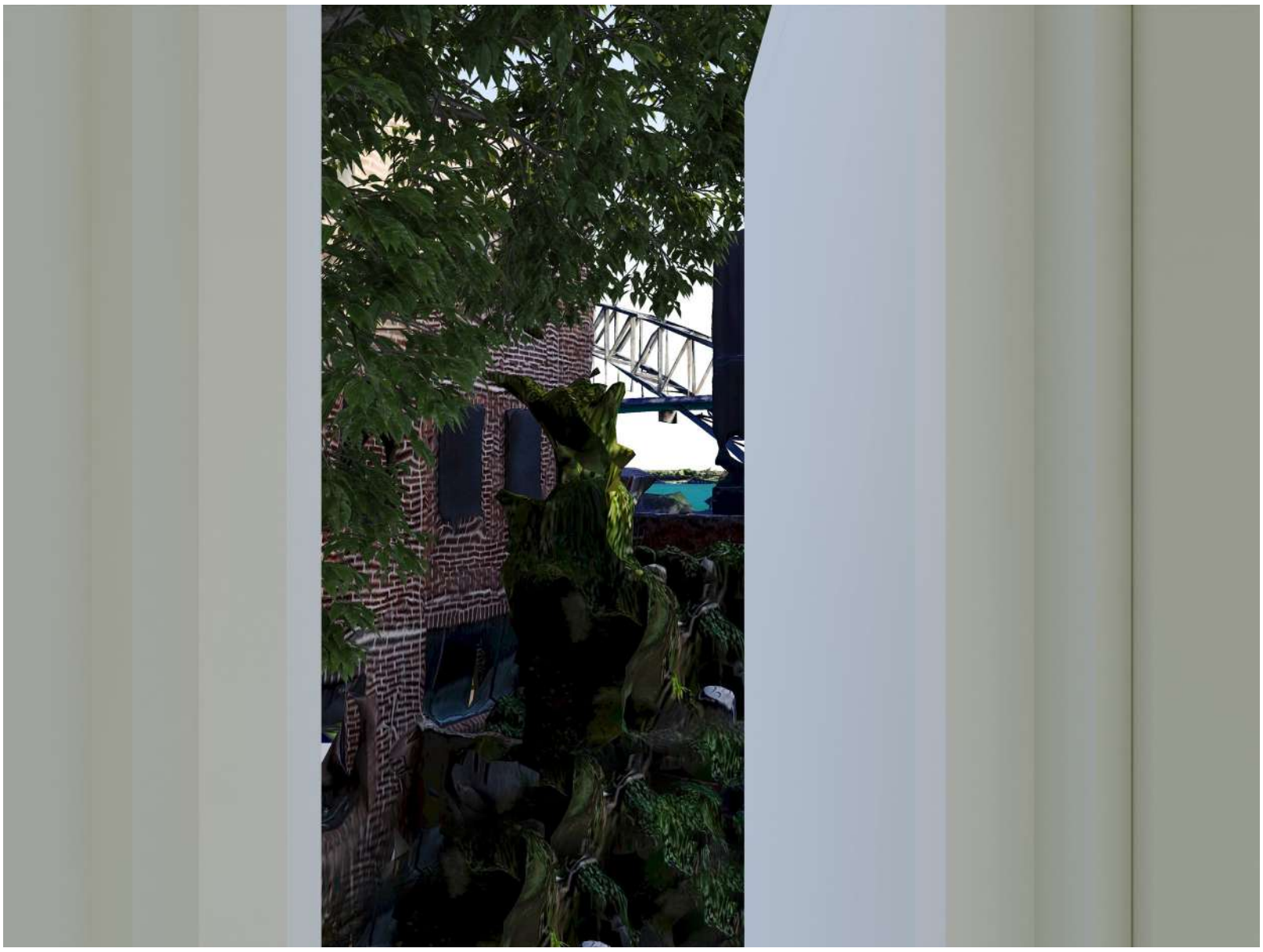
Visual impact of proposal

VIEWPOINT 08 - 77 Kirribilli Ave - Bedroom



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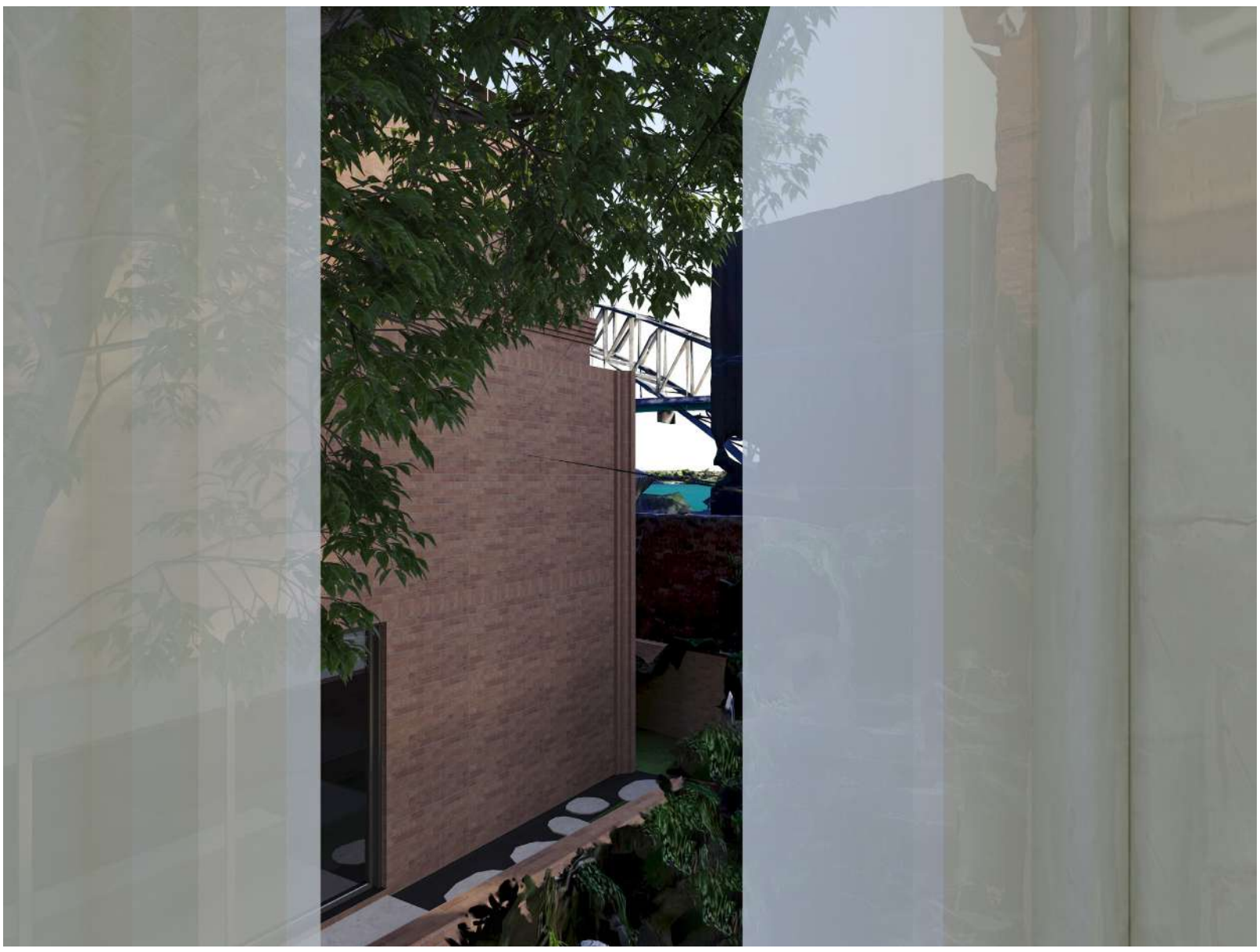
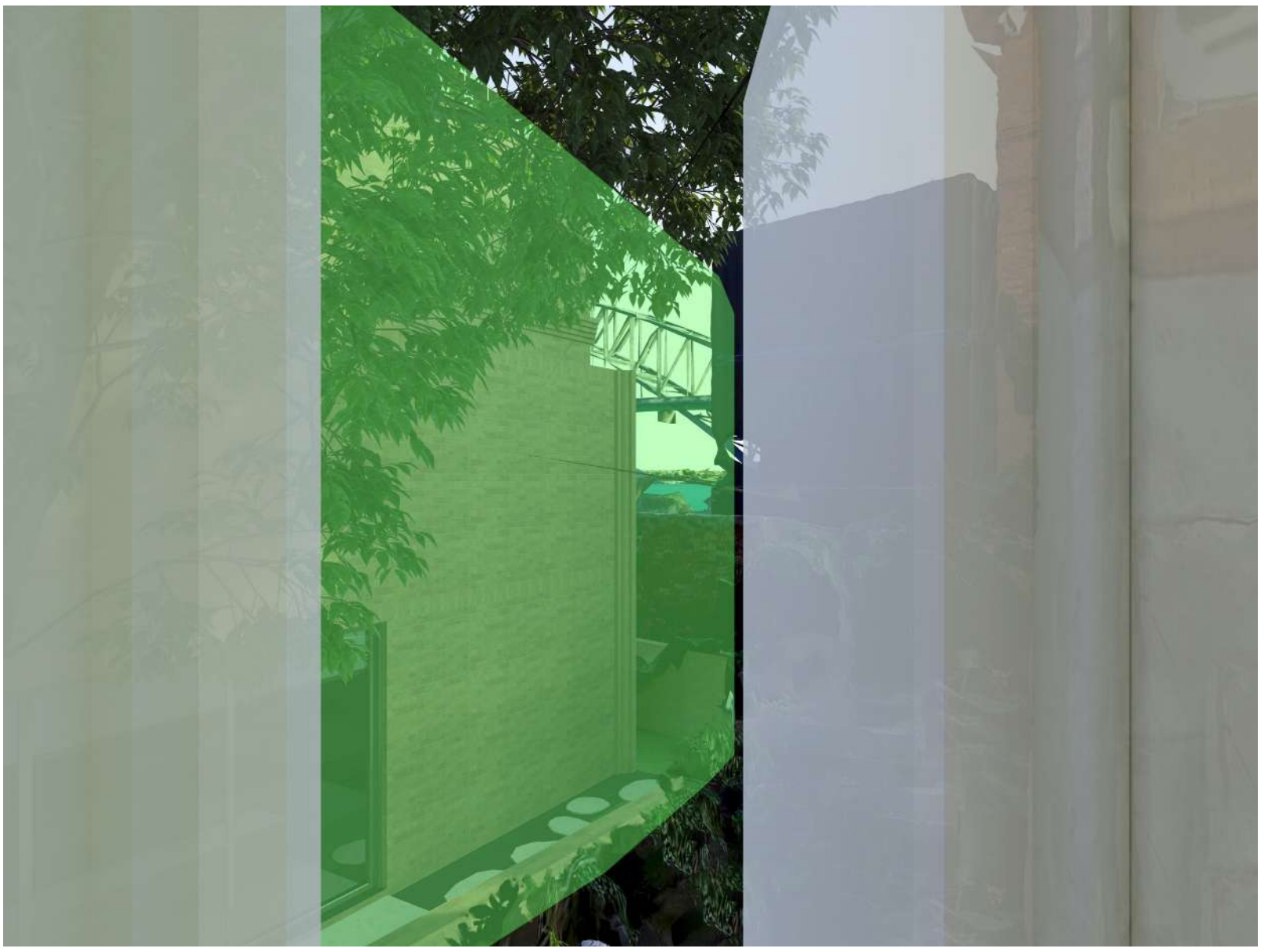


Photomontage of proposal



Photomontage of proposal - Building height plane with setback applied in green overlay

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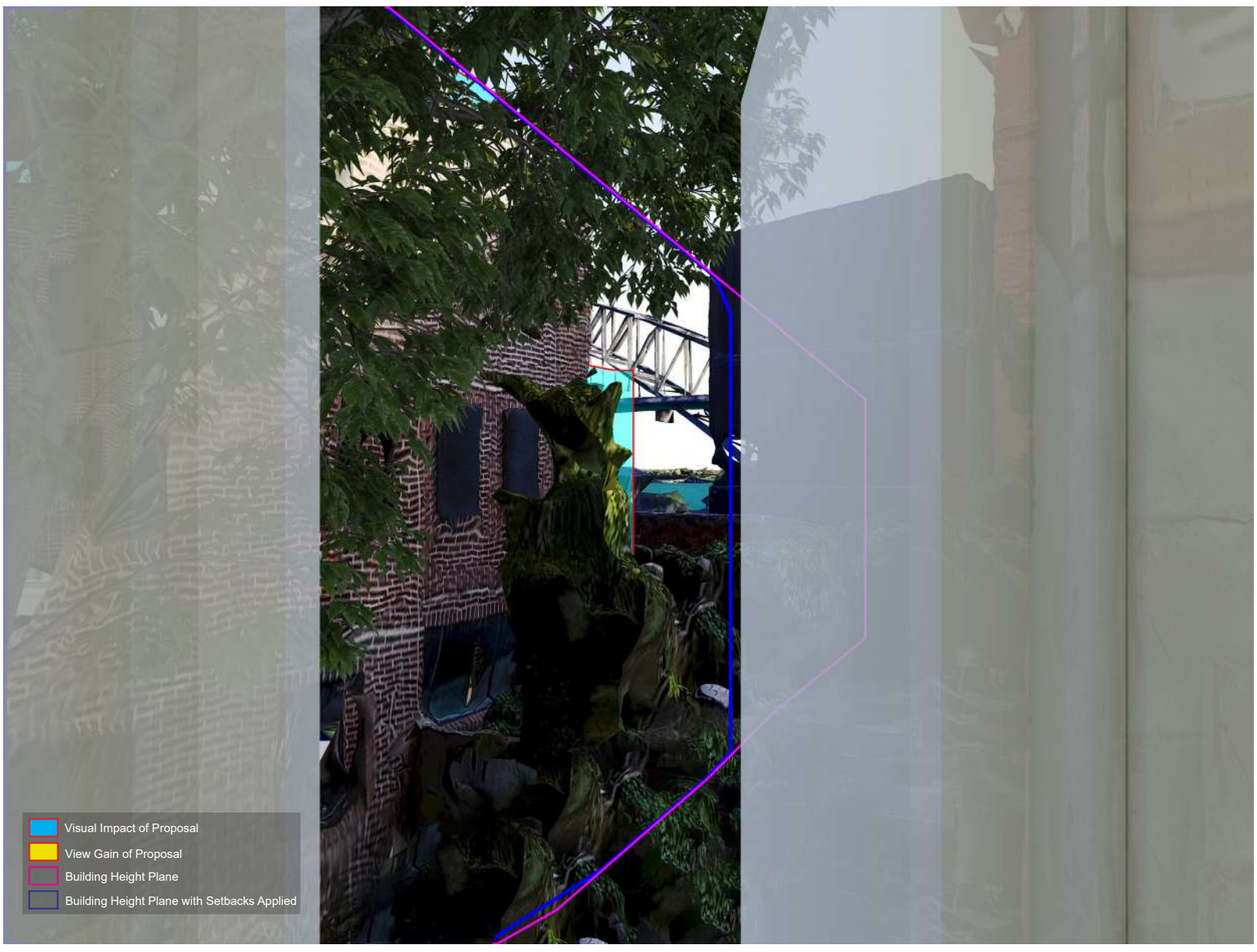
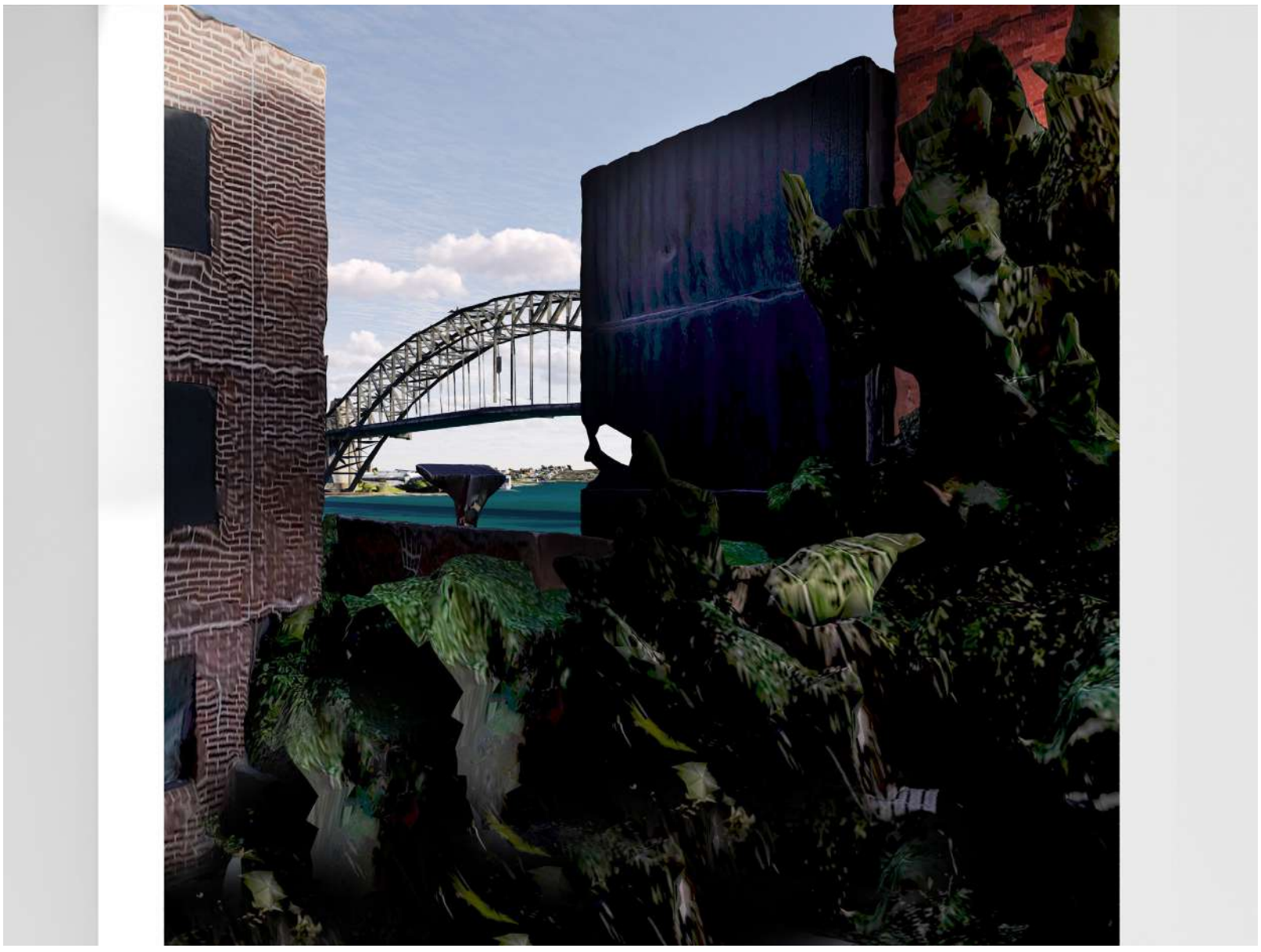
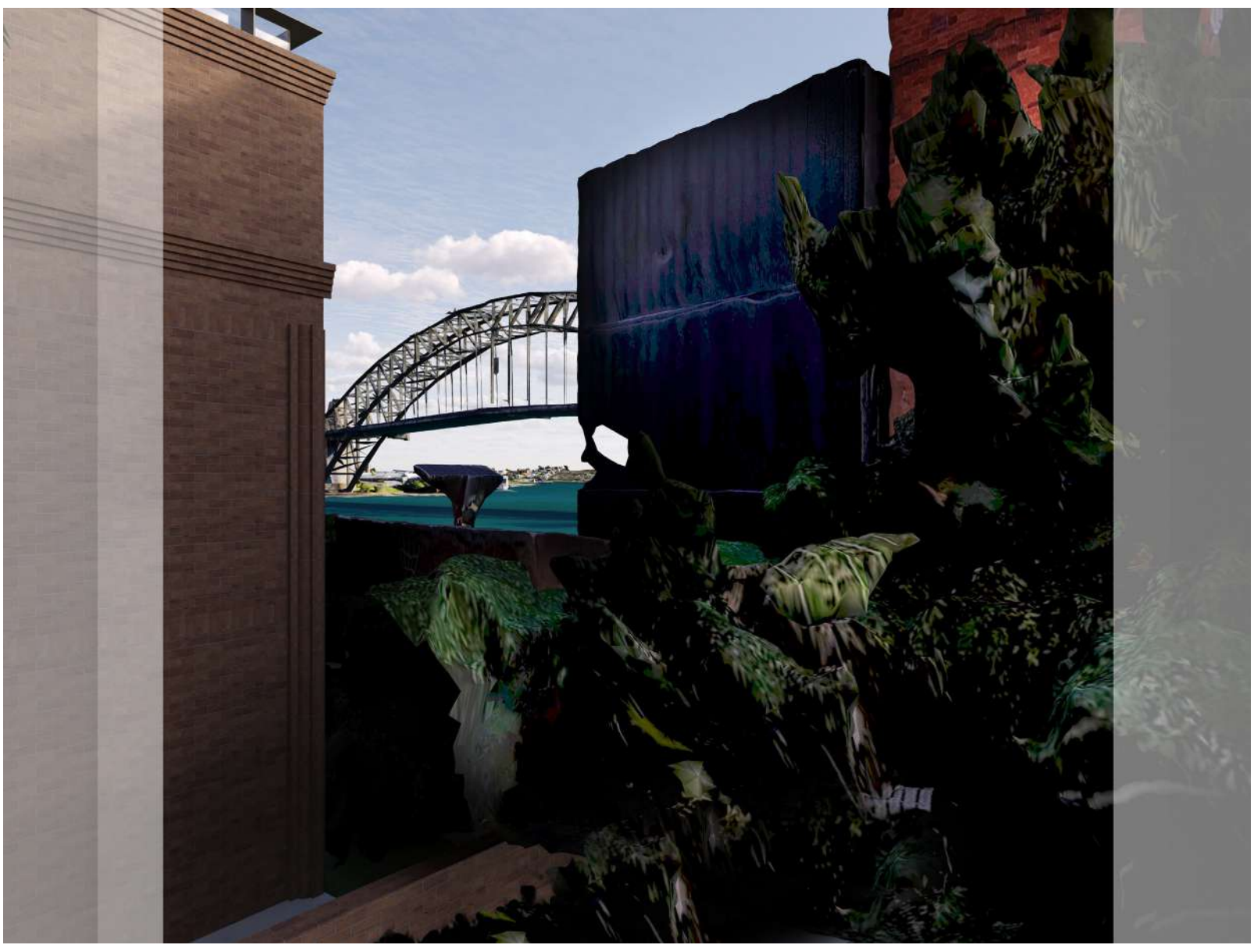


Visual impact of proposal



Photomontage of Approved D.A



Photomontage of proposal

Photomontage of proposal - Building height plane with setback applied in green overlay

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Visual impact of proposal

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

urbaine
DESIGN GROUP

VISUAL IMPACT ASSESSMENT

DEVELOPMENT APPLICATION
LOT B IN DP 346417
2 WARUDA STREET, KIRRIBILLI 2061

SEPTEMBER 4 2025

Project Type: Development Application
Lot B in DP 346417
Address: 2 Waruda Street, Kirribilli 2061

CONTENTS

1. INTRODUCTION

1.1. Scope and Purpose of Report

This Visual Impact Report has been prepared for MHNDUnion Architects and is submitted to the North Sydney Council in support of a Development Application (DA) for a Residential Flat Building at No.2 Waruda Street, Kirribilli 2061 (the site). The report provides an analysis of the proposed development's visual impact in relation to its visual and statutory contexts and is to be read in conjunction with the drawings and other material submitted with the development application.

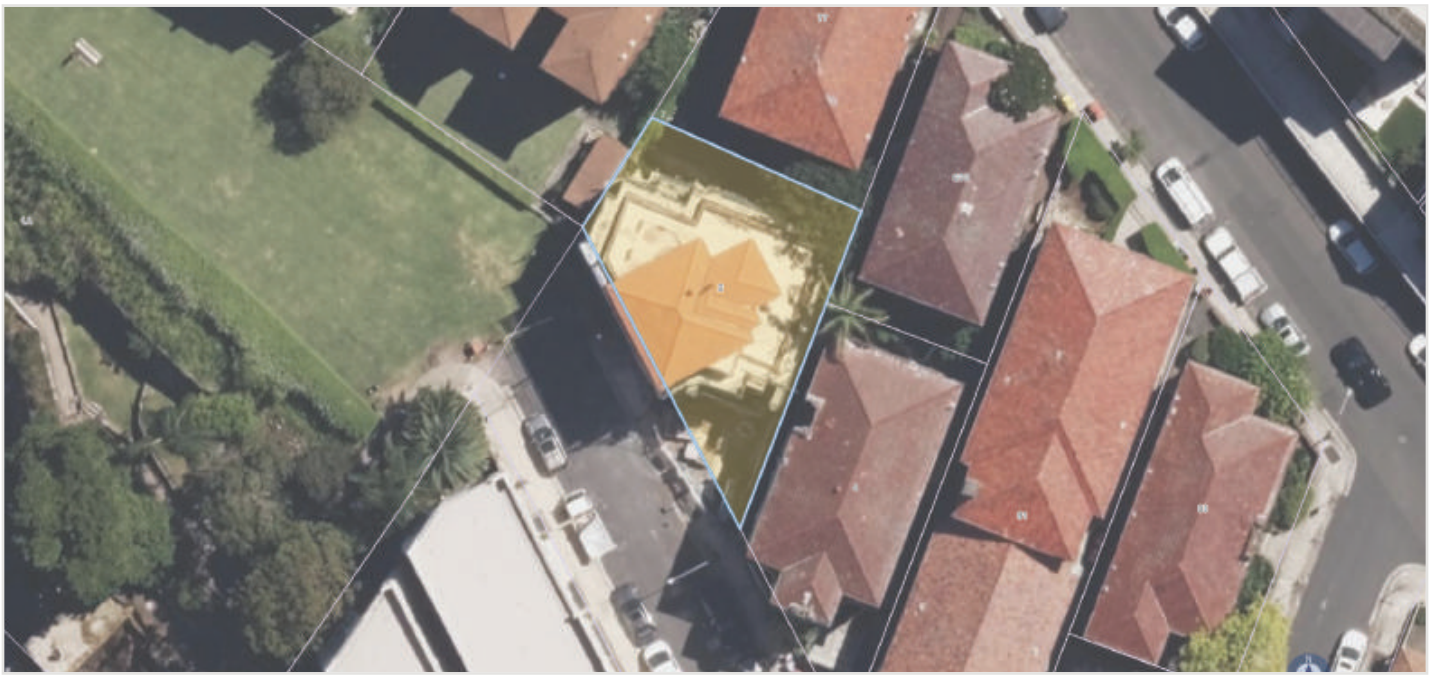


Figure 1 – Site location shown in magenta

1.2. The Proposed Development

1.2.1. The Site and existing property

The subject site is legally described as Lot B in DP 346417 and known as 2 Waruda Street, Kirribilli.

The site has a total area of approximately 289.7m2 with a frontage of 23.98m to Waruda Street.

The site is located at the end of Waruda Street and is adjacent to public open space named Dr Mary Booth Lookout. The original building has been demolished and substantial construction has been completed for the previous consent to construct a four storey residential flat building comprising three apartments with basement car parking. However, it is understood works have stopped on site subject to a Stop Work Order by the Building Commission NSW dated 16 September 2024.

The site is located in a R4 High Density Residential Zone and is surrounded by residential flat buildings however, the south western corner of the site adjoins public open space and the site is located near to the foreshore with views of the Harbour and Sydney Harbour Bridge. The site is located within the Kirribilli Conservation Area.

Figure 2 – Subject site shown in magenta overlay

1.3. Proposed Land Use and Built Form

The existing partially constructed building was approved by the North Sydney Independent Planning Panel (NSIPP) on 06 April 2016 for the demolition of an existing building and construction of a four storey residential flat building comprising three apartments with basement car parking. The approved development had a maximum building height of 11.2m compliant with the maximum permissible building height (12 metres) in accordance with Clause 4.3 in NSLEP 2013. A subsequent modification application DA 357/15/2 sought consent to modify DA 357/15 with regard to deletion of a deferred commencement condition and other amendments was approved by the Land and Environment Court dated 28 November 2016 but not increase the height of the building.

PROPOSAL

The applicant has sought pre-lodgement advice regarding a proposal for a dwelling at 2 Waruda Street. The dwelling will consist of a basement level and four residential levels. Below is a brief description of the proposed building as per the plans prepared by MHND Union.

Basement- Lap Pool, car stacker, laundry, WC, storage, plant room, bathroom and sauna.

Ground Level- Open plan kitchen and living floor space and garage

Level 1 - Guest room, study/ home office, tea room and WC.

Level 2 - 3 bedrooms with ensuites

Level 3 - Wet Bar and Wine Display, Rumpus, Bathroom and Terrace.

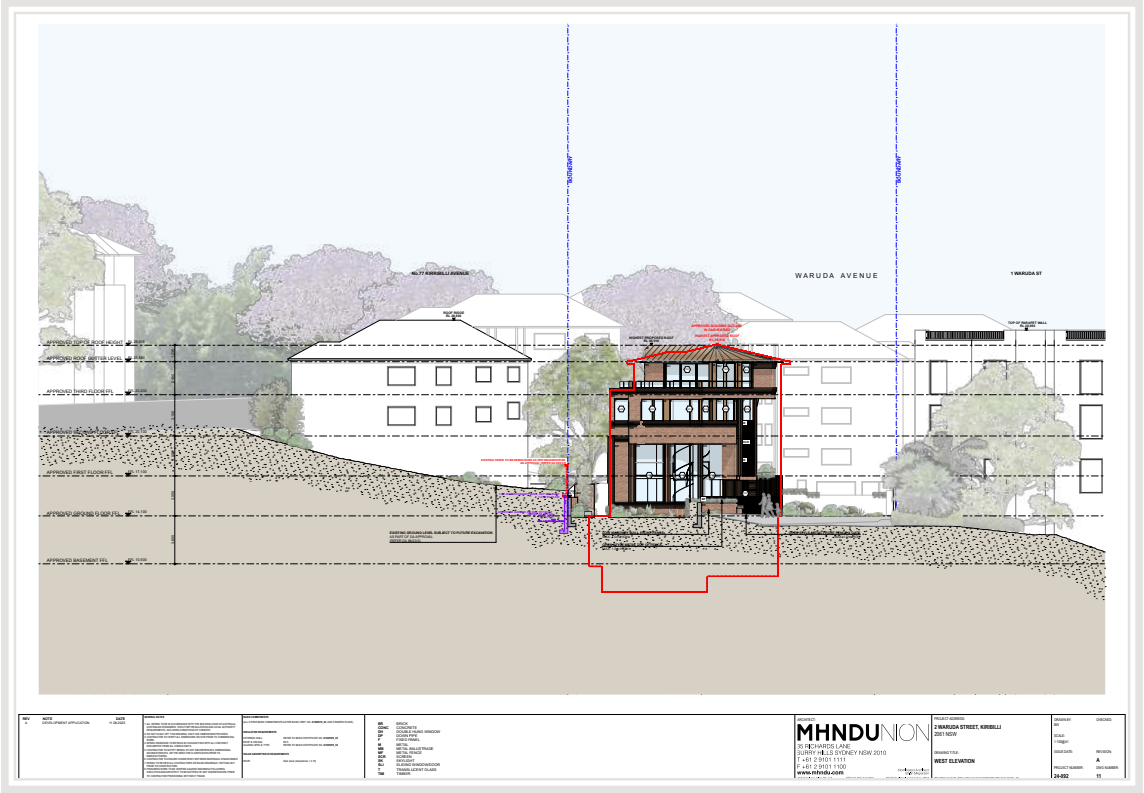


Figure 3a – Elevations of the proposed design by MHNDUnion Architects.

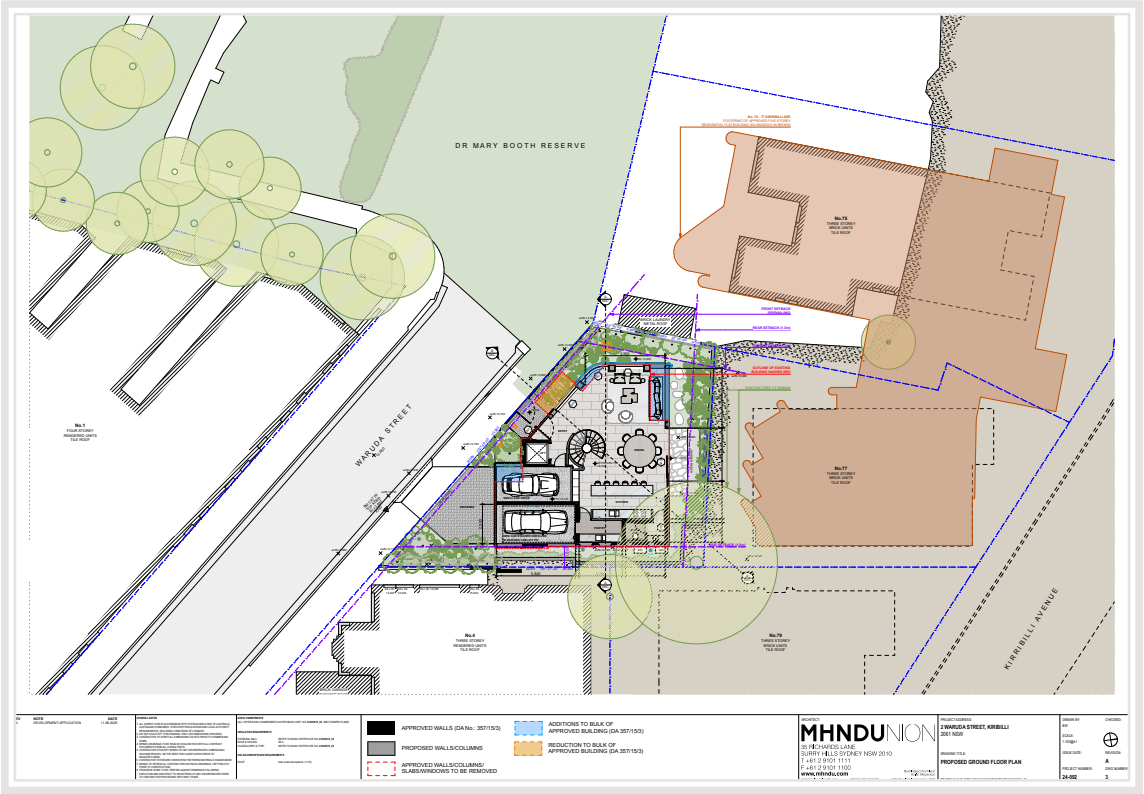


Figure 3b – Typical floor plan of the proposed design by MHNDUnion Architects

1.4. 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.

1.4.1. Process

Survey, plans, elevations and model of the proposal were sourced from the architect , MHNDUnion Architects and aligned to the scene using the survey information from Harrison Friedman & Associates Pty Ltd Surveyors, which accompanies the DA submission.

A drone assessment was undertaken and triangulated into a 3D point cloud which was aligned to ground control points using a RTK GNSS rover with NTRIP corrections. This was placed into the scene and further verified against the survey DWG and aligned to a wider LIDAR model of Sydney

The original building was constructed in modeling software based on the 2014 survey by Stutchbury Jaques Prt Ltd 2014 and aligned to the 3D scene. Images provided by the client were updated to the current building and planting based on the recent point cloud survey (figures) and drone imagery - see figure 4 and Appendix E.

Virtual cameras were placed into the 3D model to match various selected viewpoints, in both height, position, pitch, roll, yaw, sensor size and lens. From these cameras, rendered views have been generated and photomontaged into the existing photos. Where real views were not possible virtual views were created using the same 3D scene and verified in accuracy by the montage of the real photos.

Figure 4 – Point Cloud of the site including local buildings and trees.

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.

1.4.2. 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 Principle for view sharing established in Tenacity Consulting v Warringah Council [2004] NSWLEC 140. This 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.*

However, there is no peer review system for determining the accuracy of the base material used for visual impact assessments. As a result, Urbaine 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: Selected private viewpoint locations for visual impact assessments with site outlined in red.

1.4.3. Site Inspections

A site inspection was undertaken to photogrammetry scan the site for detailed analysis

- *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*

Photography were provided by council, where this was not available existing photos were used and where not photography was provided virtual viewpoints were created using the scan.

The map, see figure 5, indicates chosen locations for site photography.

Where photography was not possible or impracticable in regards to time, resources and lilkely hood of high value view loss, drone images were taken from the boundary or virtual views were used. The map, see figure 5, 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 6.

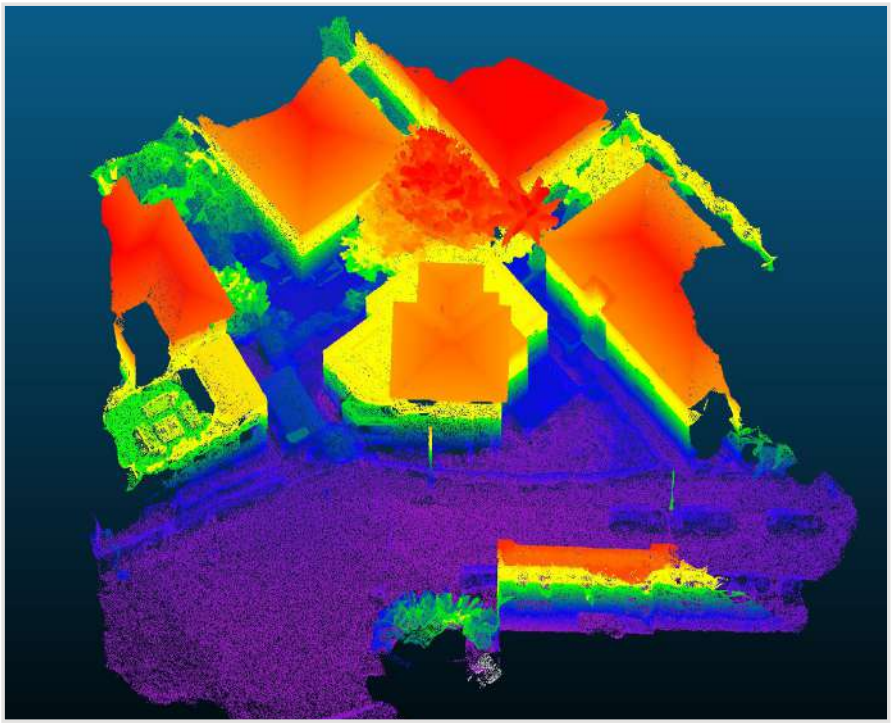


Figure 6: Neighbourhood with gradient ramp to show relative heights or roofs and trees

1.4.4. Contextual Analysis:

An analysis was undertaken of the visual and statutory planning contexts relevant to the assessment of visual impacts in a Development Application.

1.4.5. 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.

1.4.6. Statutory Planning Assessment:

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

1.5. 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 MHNDUnion Architects*
- *Wider LIDAR point cloud - The Intergovernmental Committee on Surveying and Mapping*
- *North Sydney Council*
- *North Sydney LEP*
- *Photos provided by council representative*
- *Virtual views by Urbaine Group*

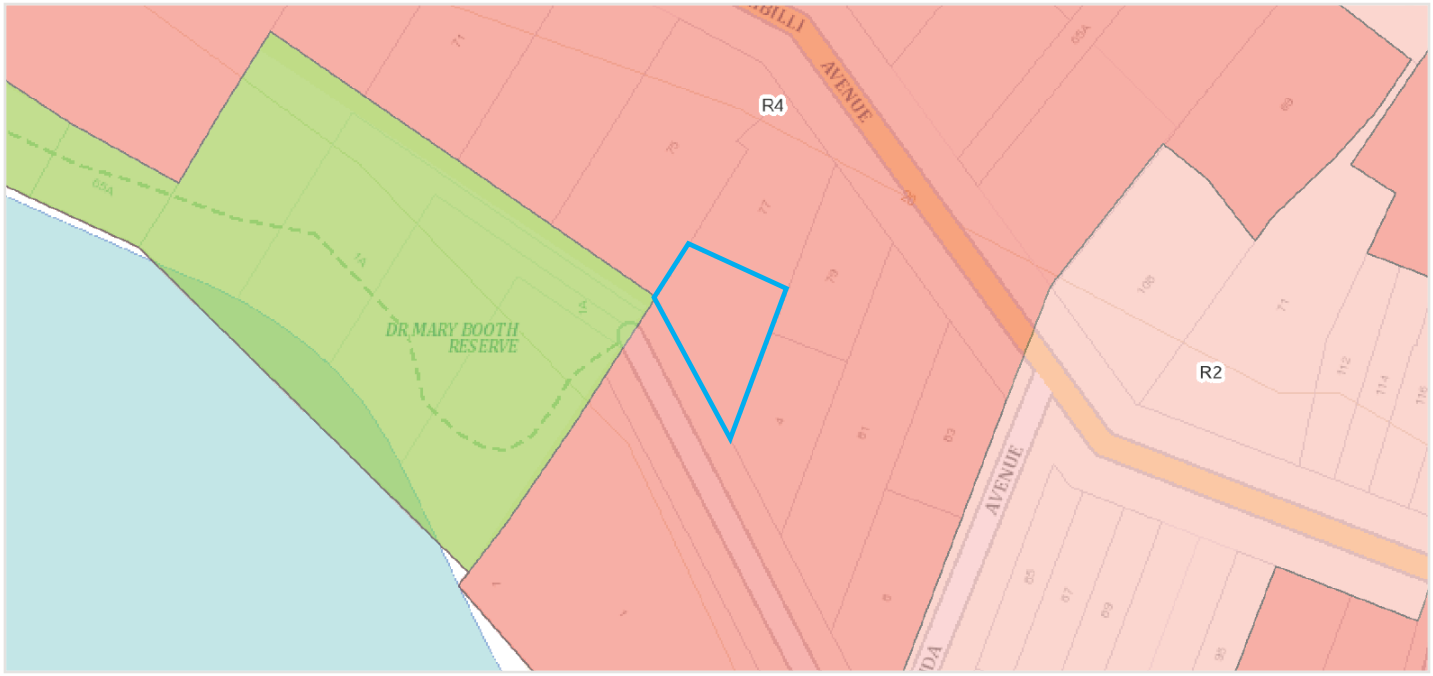


Figure 7: Land zoning map, indicating site with blue outline.

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 8.

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.

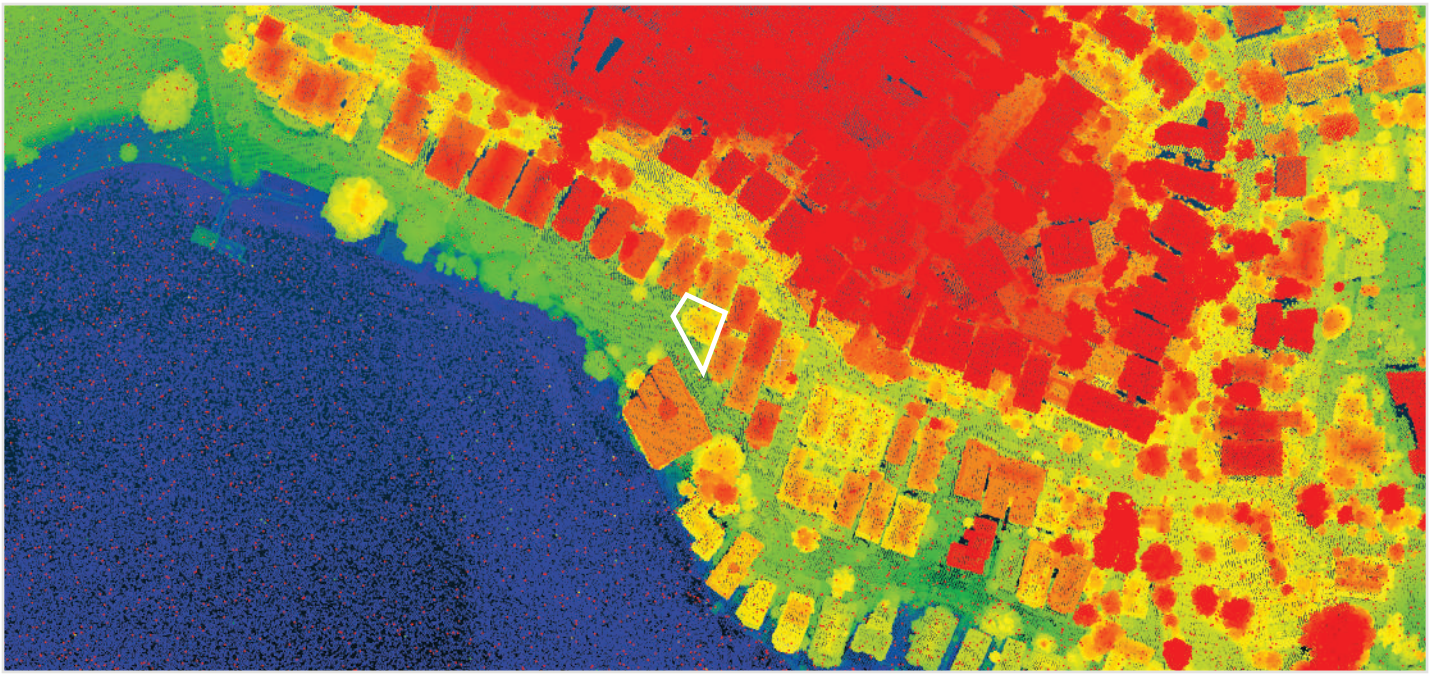


Figure 8: Point cloud including trees and buildings with gradient ramp to show topography, proposed site in magenta.

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

Within the street context, development is predominantly 1, 2 and 3 storey individual dwelling houses, orientated to maximise Harbour and City views. The subject property is not heritage listed. Within the urban context, there is a diverse fabric consisting of predominantly low density residential, with wide streets and mature, established landscaping.

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 iconic views from Kirribilli Avenue are to the south - the Opera House, CBD, Circular Quay, The Rocks and Harbour Bridge, being the main focus of high value views. Bearing this in mind, a sensitive, compliant designt hat reflects community view sharing is essential and been provided in this application.

2.3. Streetscapes

Within the local and surrounding areas, the streetscapes are typical of suburban residential areas found on the Lower North Shore, particularly around the edge of the harbour. The precinct is well established with a neighbourhood of mixed building styles and features including grand Victorian homes , early 20th Century Art-Deco apartment buildings, 3-6 storeys of modern brown face and rendered brickwork, hip roofs and glazed bay windows, and mid century higher density apartment buildings 8-15 storeys of concrete frame and red face brickwork with flat roofs. Where visible, open spaces provide some visual interest that assists to differentiate areas. There are several streetscapes with views to the site, which will have an interface with the proposed development and could therefore be affected by the proposal's visual impacts. These are discussed below:

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 from the residential properties surrounding the subject site, particularly to the north, east and also from the gaps between houses, observed from the street.

A large number of site photos were taken and a smaller number of local views selected from these, relevant for the private viewing locations, as described above. These are a mixture of static viewpoints, namely, fixed locations, as opposed to locations where viewing from a vehicle may be more likely – dynamic. The selected photos are intended to allow consideration of the visual and urban impact of the new development at both an individual and local level. They incorporate private viewing locations from properties to the north and east of the subject site, where the new proposal falls within direct line of sight and impacts on the neighbouring views and light access.

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 7 viewpoint locations

3.1.1. Method of Assessment

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 8 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 9.

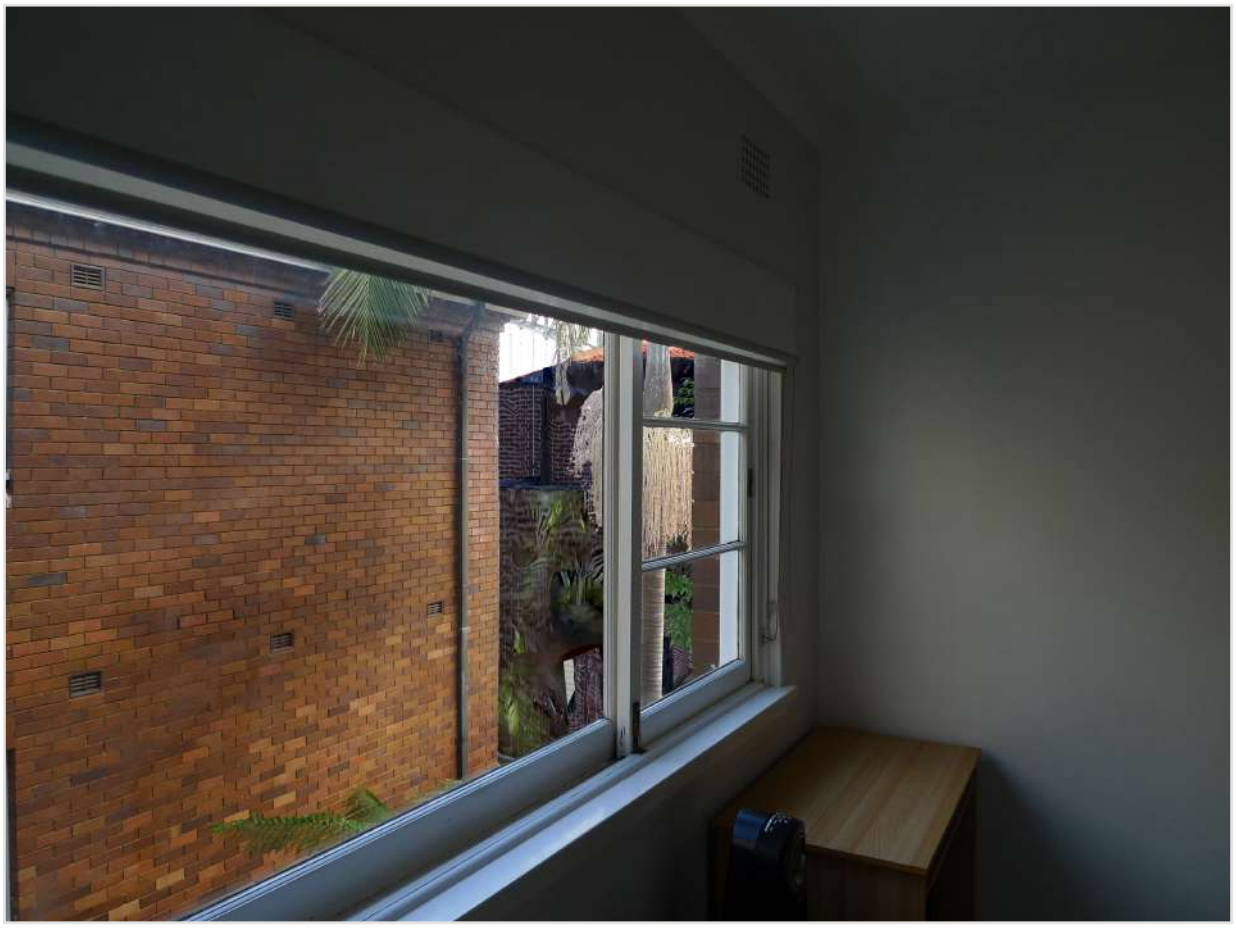
The % visual content is then assessed, together with a visual assessment of the new development's ability to blend into the existing surroundings.

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.)
MODERATE	7		
	8		
	9		
SEVERE	10		
	11	**HIGH** A high negative impact on the pre-existing visual quality of a view Examples: loss of iconic vie 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 9: Urbaine Group Assessment Table

3.1.2. Assessment at selected viewpoints

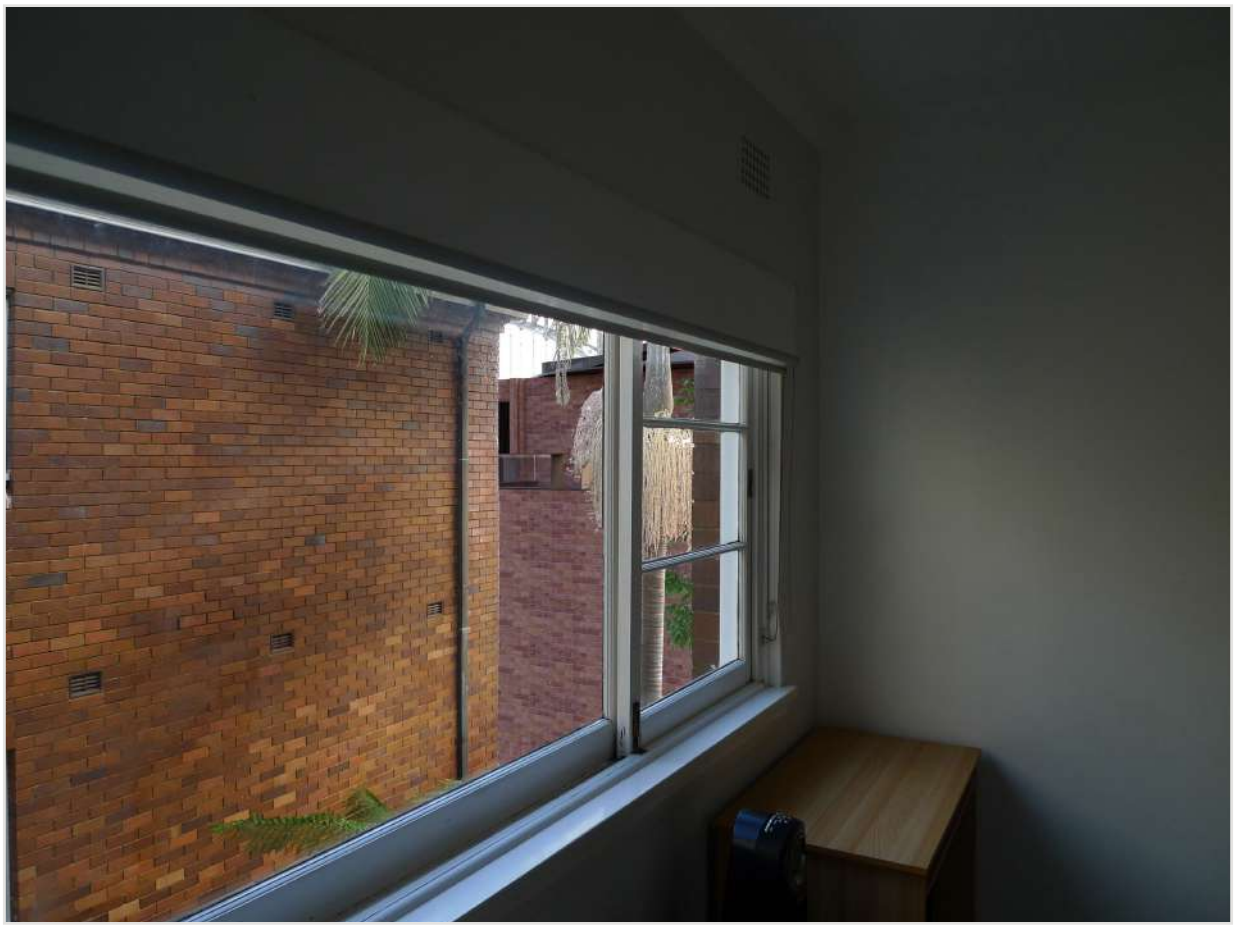
VIEWPOINT 01



Existing site photo - 4/79 Kirribilli Ave

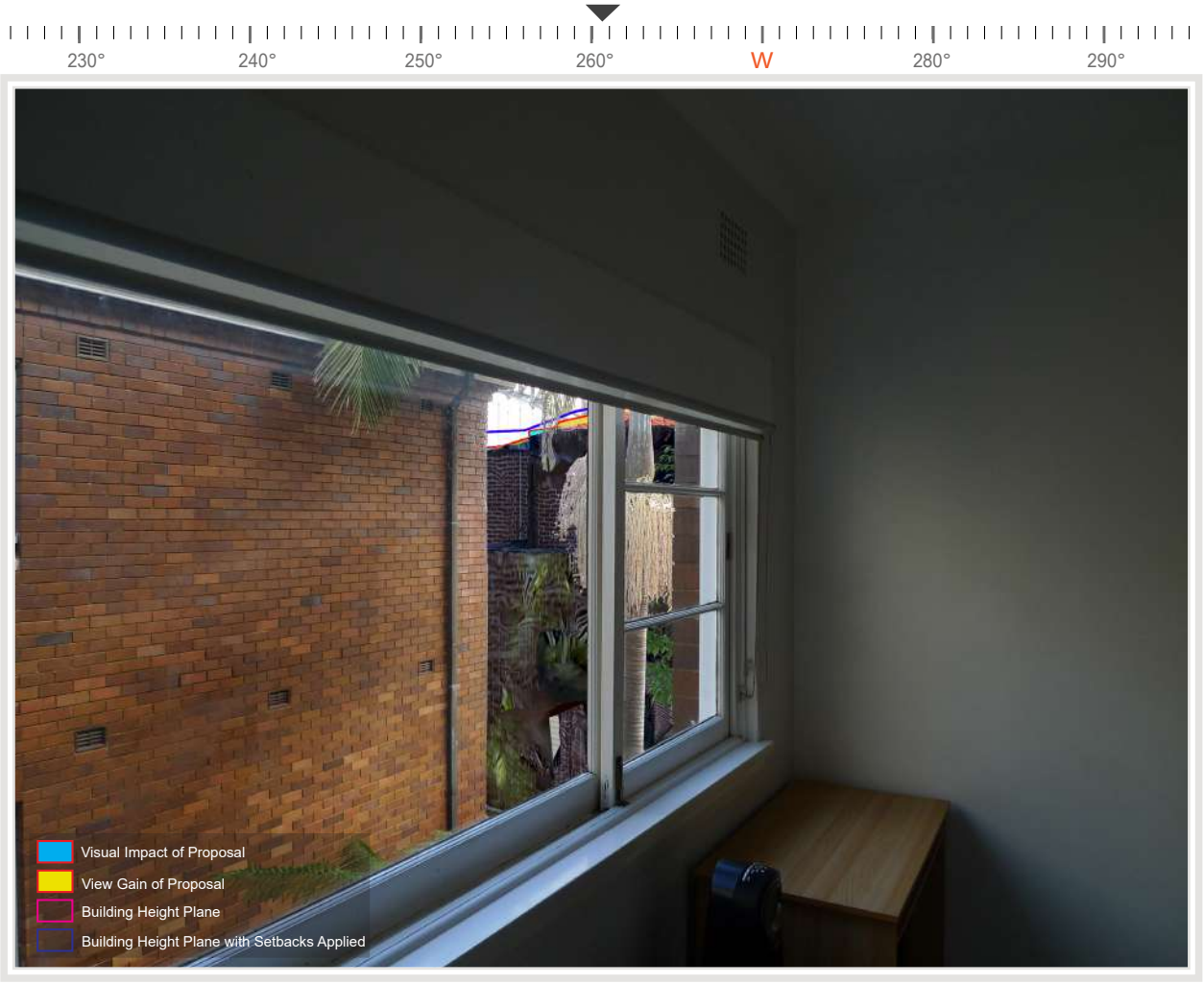
From standing position on the Level 2 bedroom window
RL + 24.15m - Distance to boundary 8.75m

Panasonic DMC - LX3
Full frame equivalent lens - 24mm



Photomontage of proposal

urbaine DESIGN GROUP



Visual impact of proposal

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 2%*
- *Visual impact ratio - view loss (including buildings) : view gain: 20% : 80%*
- *Existing Visual Assessment Scale no: 1/15 & Visual Impact Assessment Scale no: 1/15*

This static, private view is observed from the south facing window within the residential dwelling located at No. 79 Kirribilli Avenue, facing east from standing height.

From this location, the immediate foreground includes the window aperture, with views extending beyond the glazing towards the residential flat building to the south of 4 Waruda Street and the subject site to the west at No.2, Waruda Street. Beyond the existing building on the subject site there is a partial views above of the harbour bridge structure.

The proposed development will result in a small additional amount of visual impact to the upper elements of the bridge arch and to sky elements above the existing building.

Tenacity Assessment Summary:

- *Value of view: Low*
- *View location: Bedroom - secondary living area.*
- *Extent of impact: Negligible*

Reasonableness of proposal: Within the context of the development's height compliance, the proposal can be deemed acceptable, since the highest value components of the view remain and the amount of visual impact is not significant. There is also a small amount of view gain.

VIEWPOINT 02

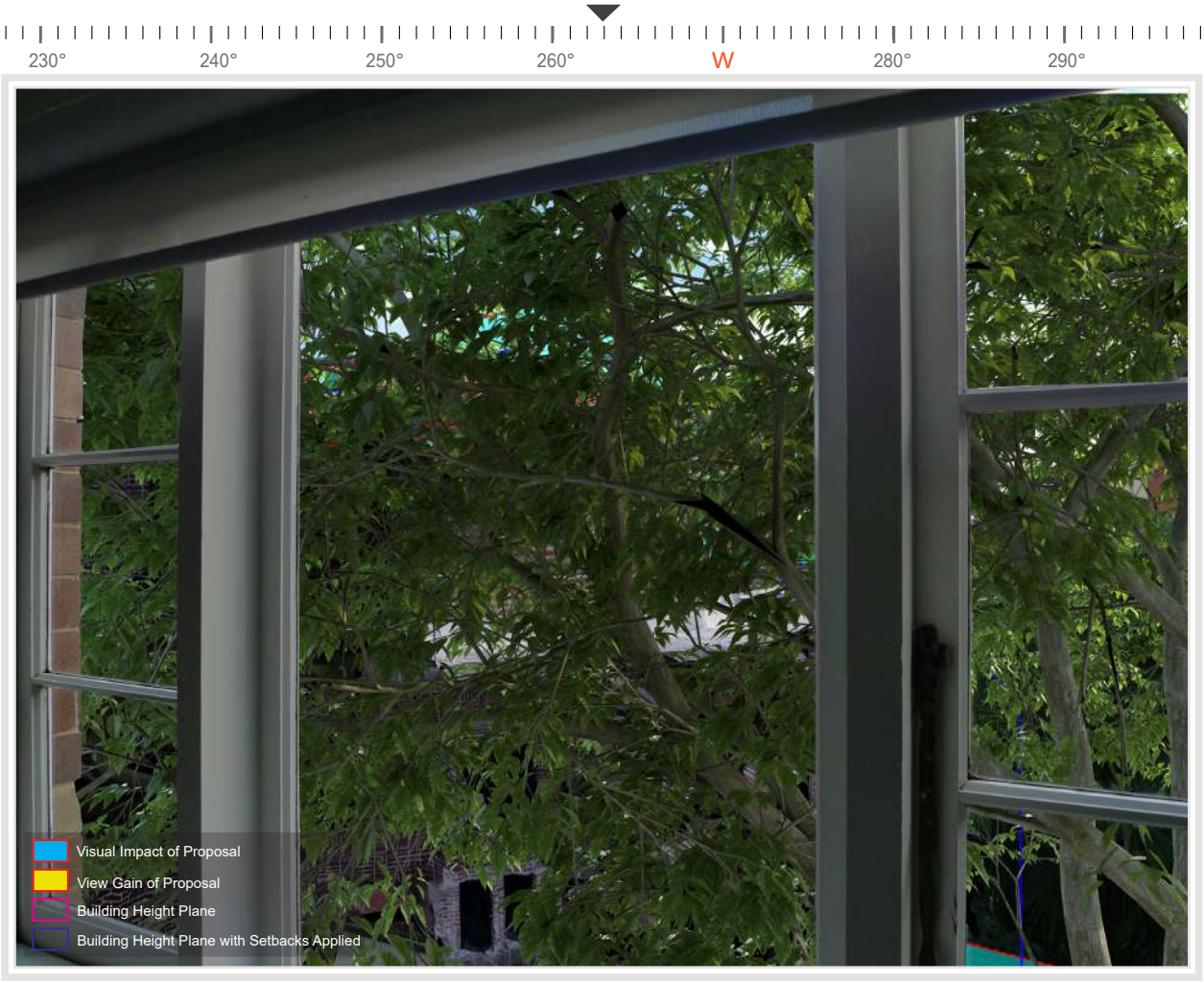
Existing site photo - 4/79 Kirribilli Ave

From standing position on the Level 1 bedroom window
RL + 24.09m - Distance to boundary 3.29m

Panasonic DMC - LX3
Full frame equivalent lens - 24mm

Photomontage of proposal

urbaine DESIGN GROUP



Visual impact of proposal

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 10%*
- *Visual impact ratio - view loss (including buildings) : view gain: 90% : 10%*
- *Existing Visual Assessment Scale no: 3/15 & Visual Impact Assessment Scale no: 2/15*

This static, private view is observed from the west west-north window within the residential dwelling located at No.79 Kirribilli Avenue, facing west from standing height.

From this location, the immediate foreground includes large mature tree filling the view corridor between 77 Kirribilli Ave and the subject site. Beyond the existing building on the subject site, there is the potential for glimpses of views of the structure of the harbour bridge approach and the tops of buildings of Lavender Bay.

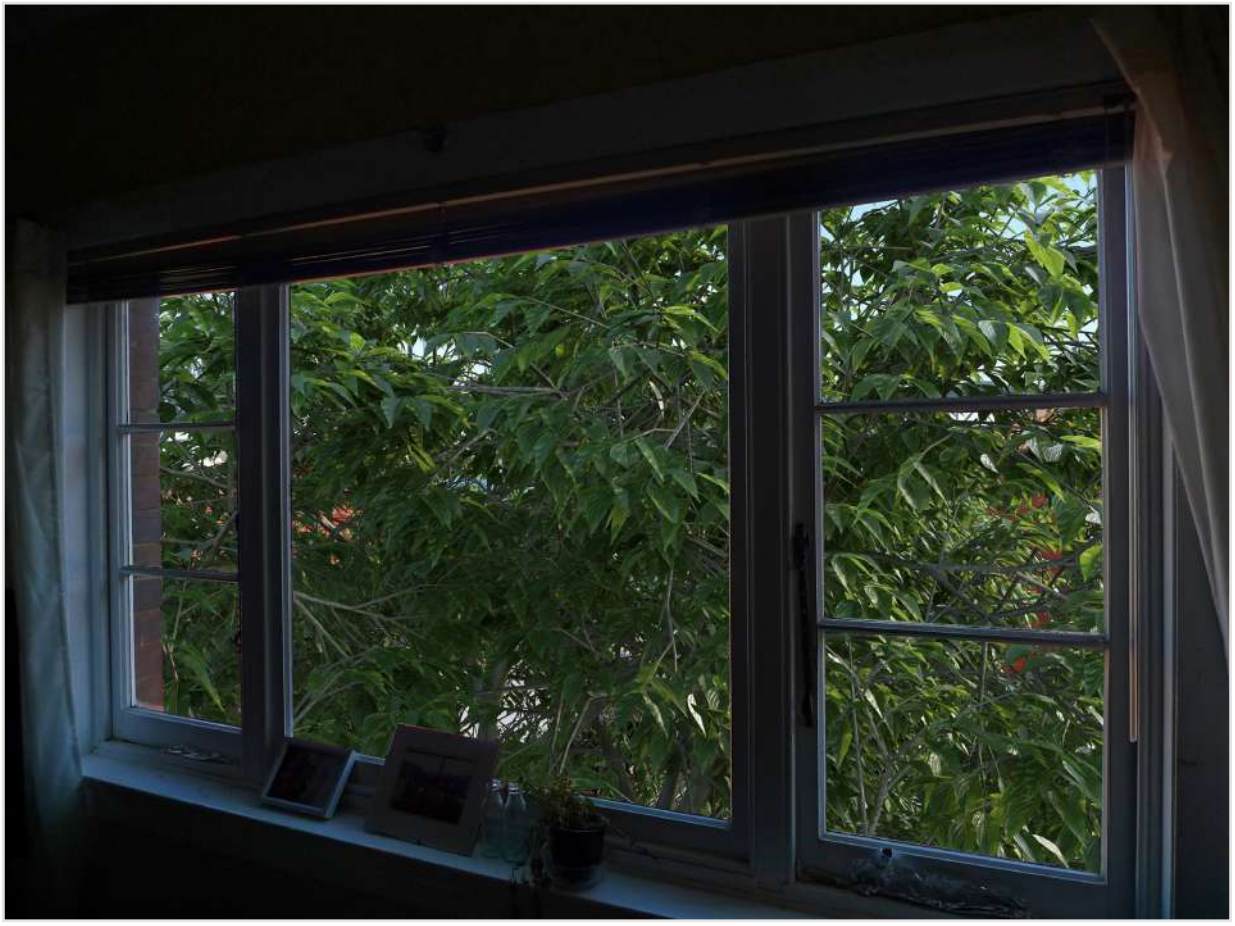
The proposed development will result in a small additional amount of visual impact to the potential glimpses of the lower elements of the bridge and water in the harbour

Tenacity Assessment Summary:

- *Value of view: Low - Medium*
- *View location: Bedroom - secondary living area.*
- *Extent of impact: Low*

Reasonableness of proposal: Within the context of the development's height compliance, the proposal can be deemed acceptable, since the highest value components of the view remain and the amount of visual impact is not significant.

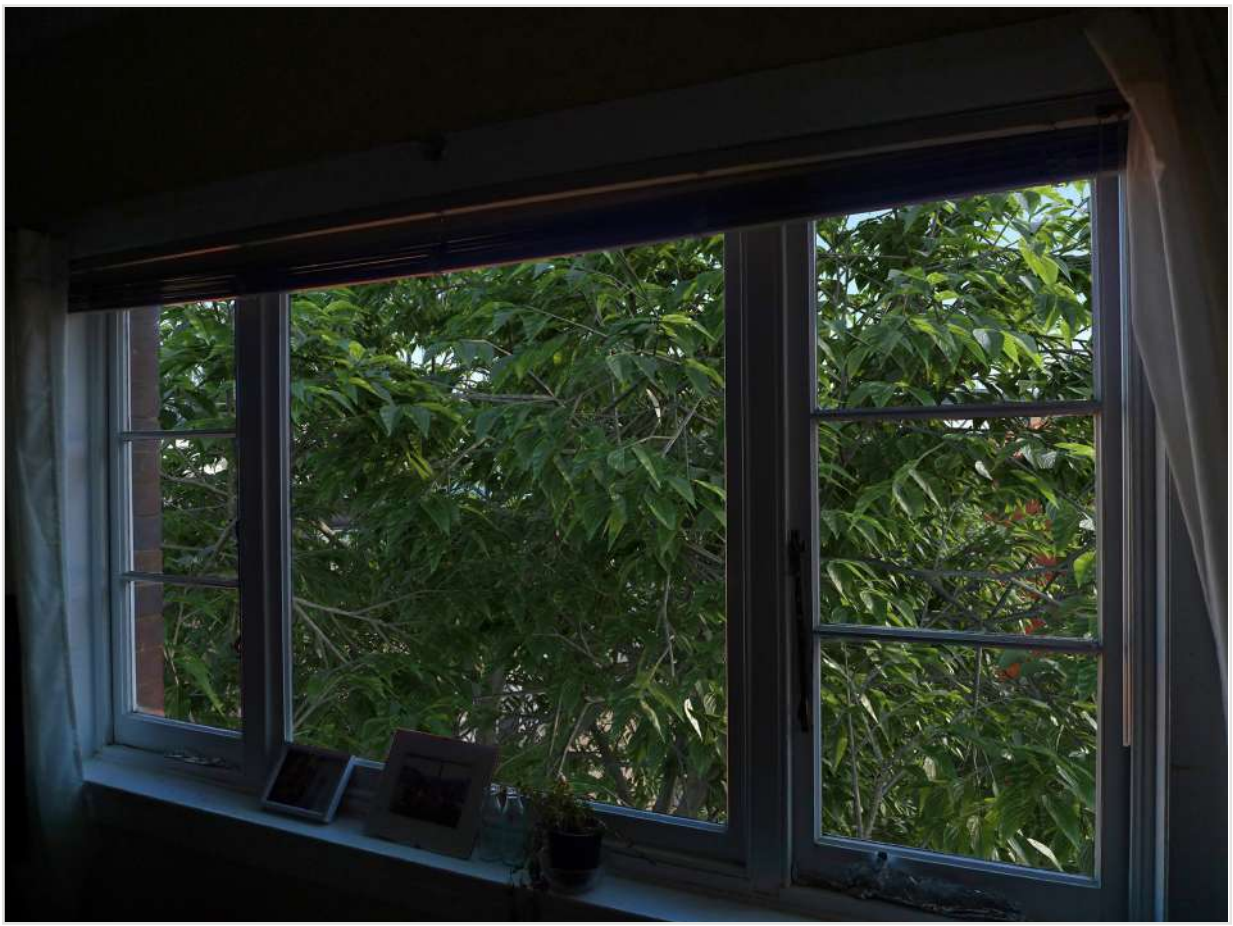
VIEWPOINT 03



Existing site photo - 6/79 Kirribilli Ave

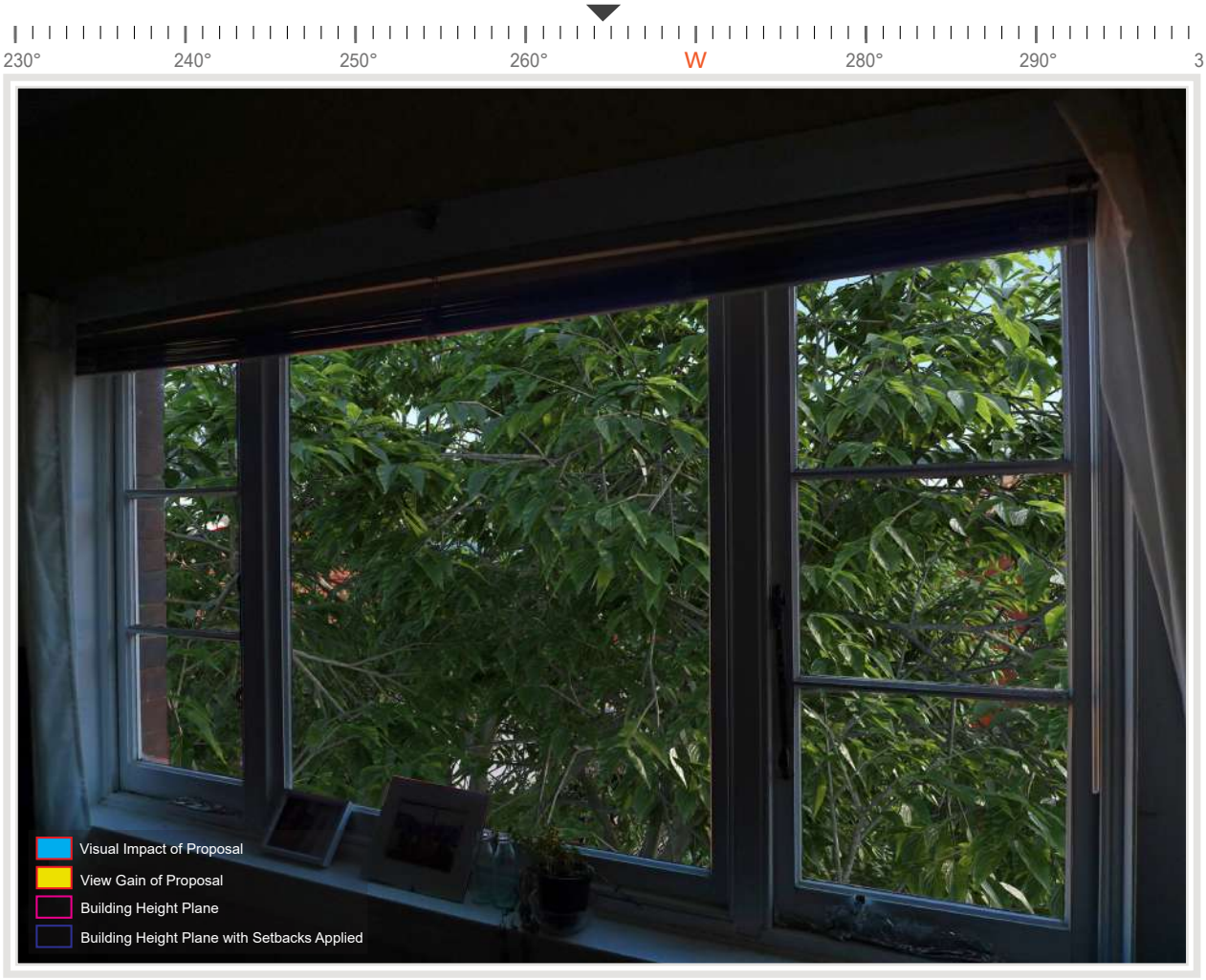
From standing position on the Level 2 living room window
RL + 27.17m - Distance to boundary 4.11m

Panasonic DMC - LX3 -
Full frame equivalent lens - 24mm



Photomontage of proposal

urbaine DESIGN GROUP



Visual impact of proposal

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 10%*
- *Visual impact ratio - view loss (including buildings) : view gain: 90% : 10%*
- *Existing Visual Assessment Scale no: 4/15 & Visual Impact Assessment Scale no: 2/15*

This static, private view is observed from the west west-north facing living room window within the residential dwelling located at No.79 Kirribilli Avenue, facing west from standing height.

From this location, the immediate foreground includes large mature tree filling the view corridor between 77 Kirribilli Ave and the subject site. Beyond the existing building on the subject site, there is the potential for glimpses of views in the midground of Mary Booth reserve and Kirribilli foreshore residence of the structure of the harbour bridge approach and the foreshore of Milsons Point with inner west suburbs and shoreline in the far distance.

The proposed development will result in a small additional amount of visual impact to the glimpses of the lower elements of the bridge and water in the harbour, though the mature tree will significantly shield the viewpoint.

Tenacity Assessment Summary:

- *Value of view: Low - Medium*
- *View location: Living room - primary living area.*
- *Extent of impact: Low*

Reasonableness of proposal: Within the context of the development's height compliance, the proposal can be deemed acceptable, since the highest value components of the view remain and the amount of visual impact is not significant.

VIEWPOINT 04

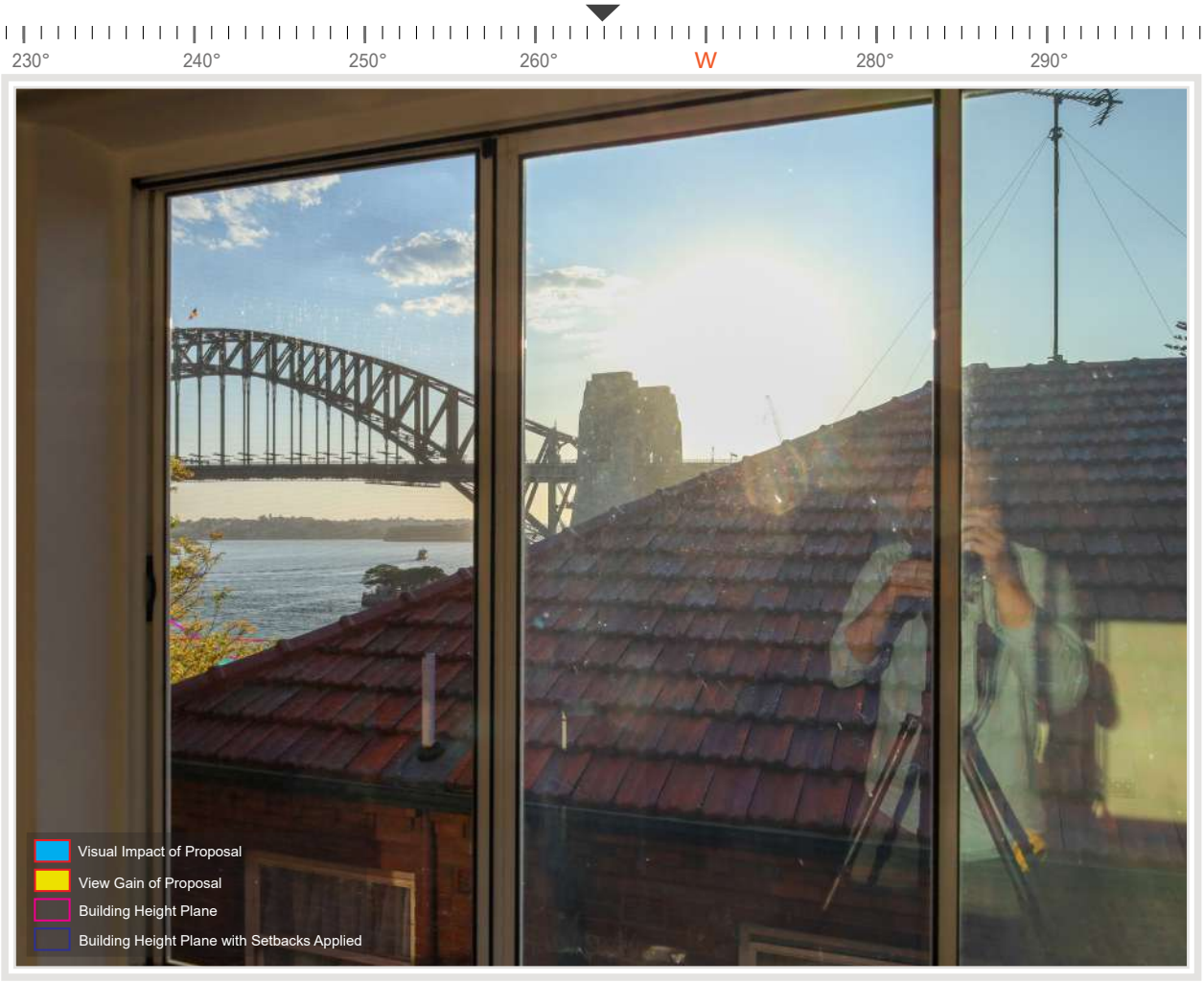
Existing site photo - 5/79 Kirribilli Ave

From standing position on the Level 2 living room window
RL + 27.27m - Distance to boundary 8.81m

Canon RP full frame - 24mm

Photomontage of proposal

urbaine DESIGN GROUP



Visual impact of proposal

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 5%*
- *Visual impact ratio - view loss (including buildings) : view gain: 100% : 0%*
- *Existing Visual Assessment Scale no: 8 /15 & Visual Impact Assessment Scale no: 2 /15*

This static, private view is observed from the west west-north facing living room window of Unit 5 within the residential dwelling located at No. 79 Kirribilli Avenue, facing west from standing height approximately one metre behind the glazing.

From this location, the immediate foreground includes the roof of no.77 and to the south a mature tree with glimpse of residential flat building at of the subject site. Beyond this in the background, water within the harbour and the foreshore trees of Milsons Point and partial views of the harbour bridge with inner west suburbs and shoreline in the far distance.

The proposed development will result in a small additional amount of visual impact to water of the harbour above the existing building, primarily shielded behind the existing tree.

Tenacity Assessment Summary:

- *Value of view: Medium-High*
- *View location: Living Room - Primary living area.*
- *Extent of impact: Low*

Reasonableness of proposal: Within the context of the development's height compliance, the proposal can be deemed acceptable, since the highest value components of the view remain and the amount of visual impact is not significant.

VIEWPOINT 05

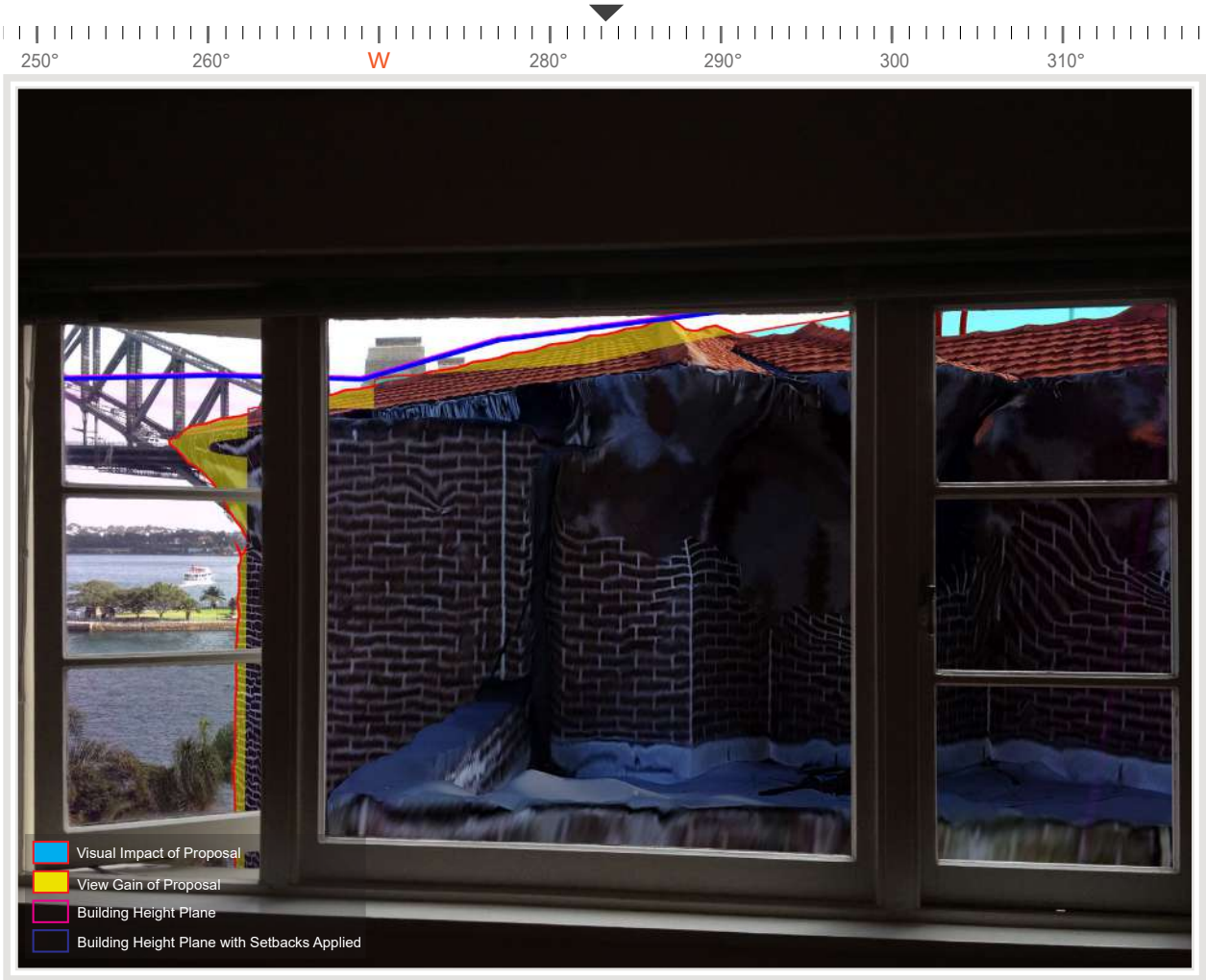
Existing site photo - 7/4 Waruda Street

From standing position on the Level 2 living room window
RL + 24.75 - Distance to boundary 2.79m

Iphone 4s
Full frame equivalent lens - 35mm

Photomontage of proposal

urbaine DESIGN GROUP



Visual impact of proposal

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 8%*
- *Visual impact ratio - view loss (including buildings) : view gain: 10% : 90%*
- *Existing Visual Assessment Scale no: 7 /15 & Visual Impact Assessment Scale no: 2 /15*

This static, private view is observed from the west west-north facing living room of Unit 7 within the residential dwelling located at No.4 Waruda Street, facing west from standing height.

From this location, the immediate foreground is the residential flat building on the subject site with an aperture for further distance view to the southern side. Beyond the existing building on the subject site, there is a view of water within the harbour and the foreshore look out of Milsons Point and partial views above this include the structure of the harbour bridge with inner west suburbs, Goat Island and shoreline in the far distance

The proposed development will result in a small additional amount of visual impact to the upper elements of the bridge and to sky elements above the existing building.

Tenacity Assessment Summary:

- *Value of view: Medium.*
- *View location: Living room - Primary living area.*
- *Extent of impact: Negligible*

Reasonableness of proposal: Within the context of the development's height compliance, the proposal can be deemed acceptable, since the highest value components of the view remain and the amount of visual impact is not significant. With the view gain considered it could be called an improvement.

VIEWPOINT 06

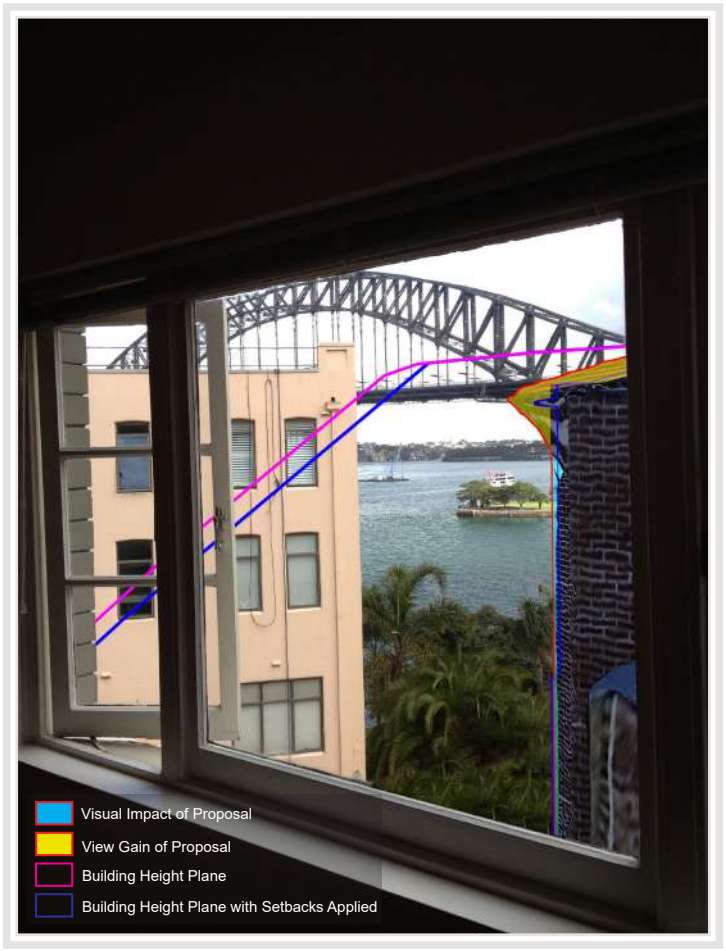
Existing site photo - 7/4 Waruda St

From standing position on the Level 2 living room window
RL + 25.05m - Distance to boundary 2.98m

Iphone 4s
Full frame equivalent lens - 35mm

Photomontage of proposal

urbaine DESIGN GROUP



Visual impact of proposal

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 2%*
- *Visual impact ratio - view loss (including buildings) : view gain: 10% : 90%*
- *Existing Visual Assessment Scale no: 9 /15 & Visual Impact Assessment Scale no: 2 /15*

This static, private view is observed from the west west-north facing living room within the residential dwelling located at No.4 Waruda Street, facing west from standing height.

From this location, the immediate foreground is the residential flat building on the subject site with an aperture for further distance view to the southern side. Beyond the existing building on the subject site, there is a view of water within the harbour and the foreshore look out of Milsons Point and partial views above this include the structure of the harbour bridge with inner west suburbs, Goat Island and shoreline in the far distance

The proposed development will result in a small additional amount of visual impact to the tree and water elements of the harbour next to the existing building.

Tenacity Assessment Summary:

- *Value of view: Medium*
- *View location: Living room - secondary living area.*
- *Extent of impact: Minor*

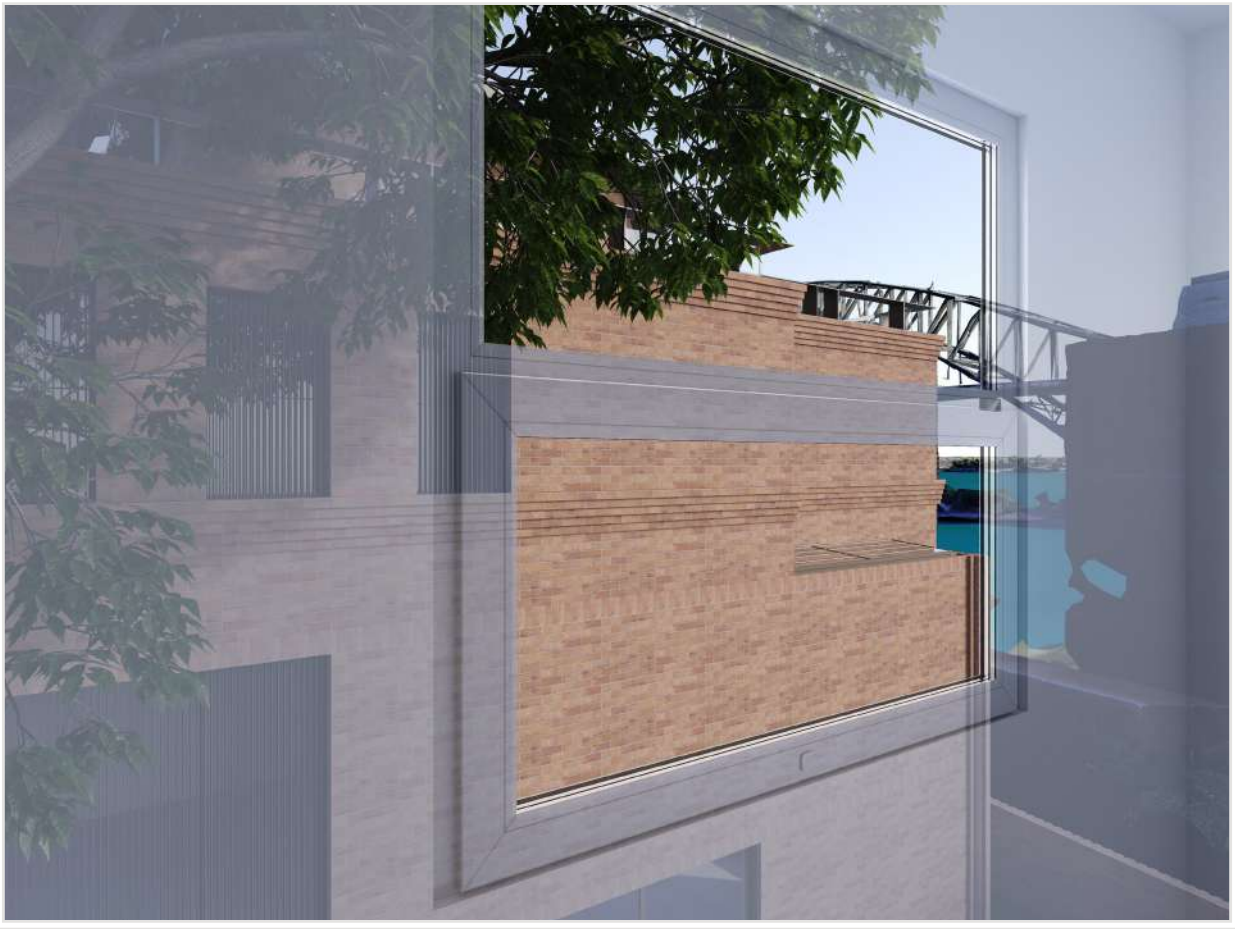
Reasonableness of proposal: Within the context of the development's height compliance, the proposal can be deemed acceptable, since the highest value components of the view remain and the amount of visual impact is not significant. With the view gain considered it could be called an improvement.

VIEWPOINT 07

Existing site photo - 3/77 Kirribilli Ave

From standing position on the Level 2 kitchen window
RL + 27.17m - Distance to boundary 4.08m

Virtual viewpoint - 24mm



Photomontage of proposal

urbaine DESIGN GROUP

Visual impact of proposal

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 8%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 100% : 0%*
- *Existing Visual Assessment Scale no: 8 /15 & Visual Impact Assessment Scale no: 7 /15*

This static, private view is observed from the south facing kitchen window of Unit 3 within the residential dwelling located at No. 77 Kirribilli Avenue, facing west from standing height approximately one metre behind the glazing.

From this location the foreground view extending beyond the glazing towards the subject site at No.2, Waruda Street and an aperture between no.75 Kirribilli Ave to the west. Beyond the existing building on the subject site, there is a small glimpse of water within the harbour and the foreshore of Milsons Point. Partial views above this include the structure of the harbour bridge.

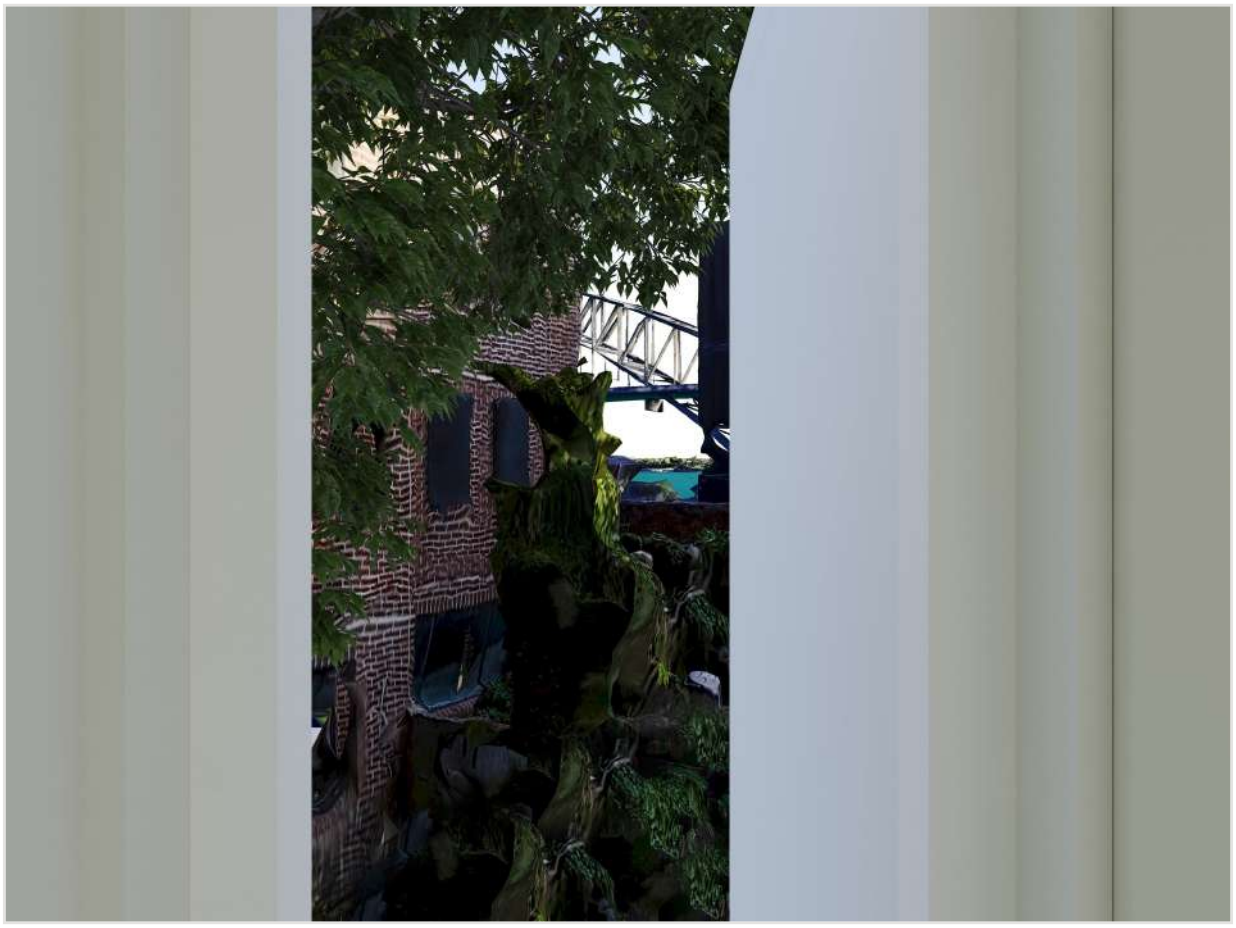
The proposed development will result in a small additional amount of visual impact to the upper elements of the bridge, water in the harbour and to sky elements above the existing building. As the view is obtained at a high angle of incidence to the glazing line the vale is diminished

Tenacity Assessment Summary:

- *Value of view: Medium.*
- *View location: Kitchen - primary living area.*
- *Extent of impact: Minor-Moderate*

Reasonableness of proposal: Within the context of the development's height compliance, the proposal can be deemed acceptable, since the highest value components of the view remain and the amount of visual impact is not significant.

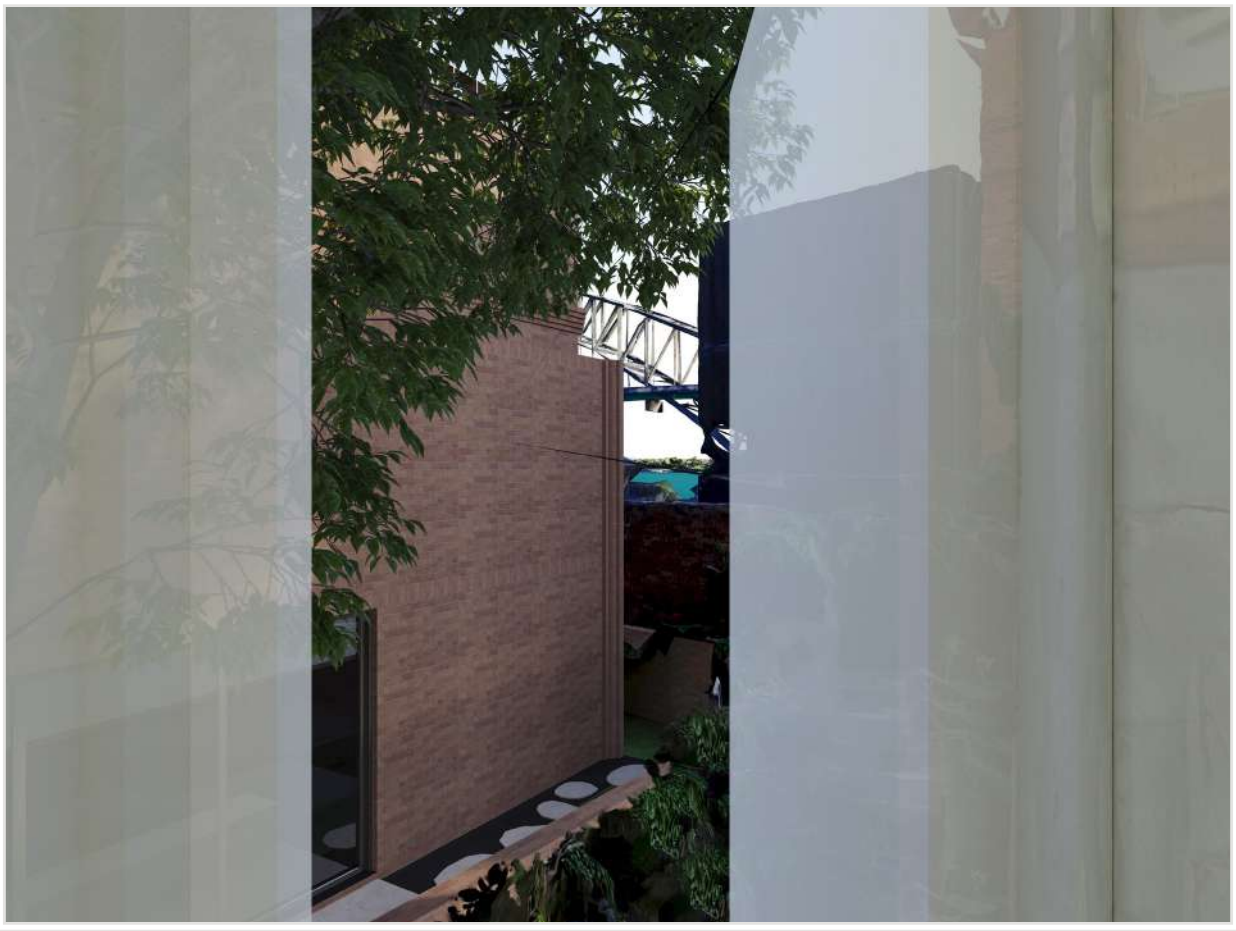
VIEWPOINT 08



Existing site photo - 77 Kirribilli Ave

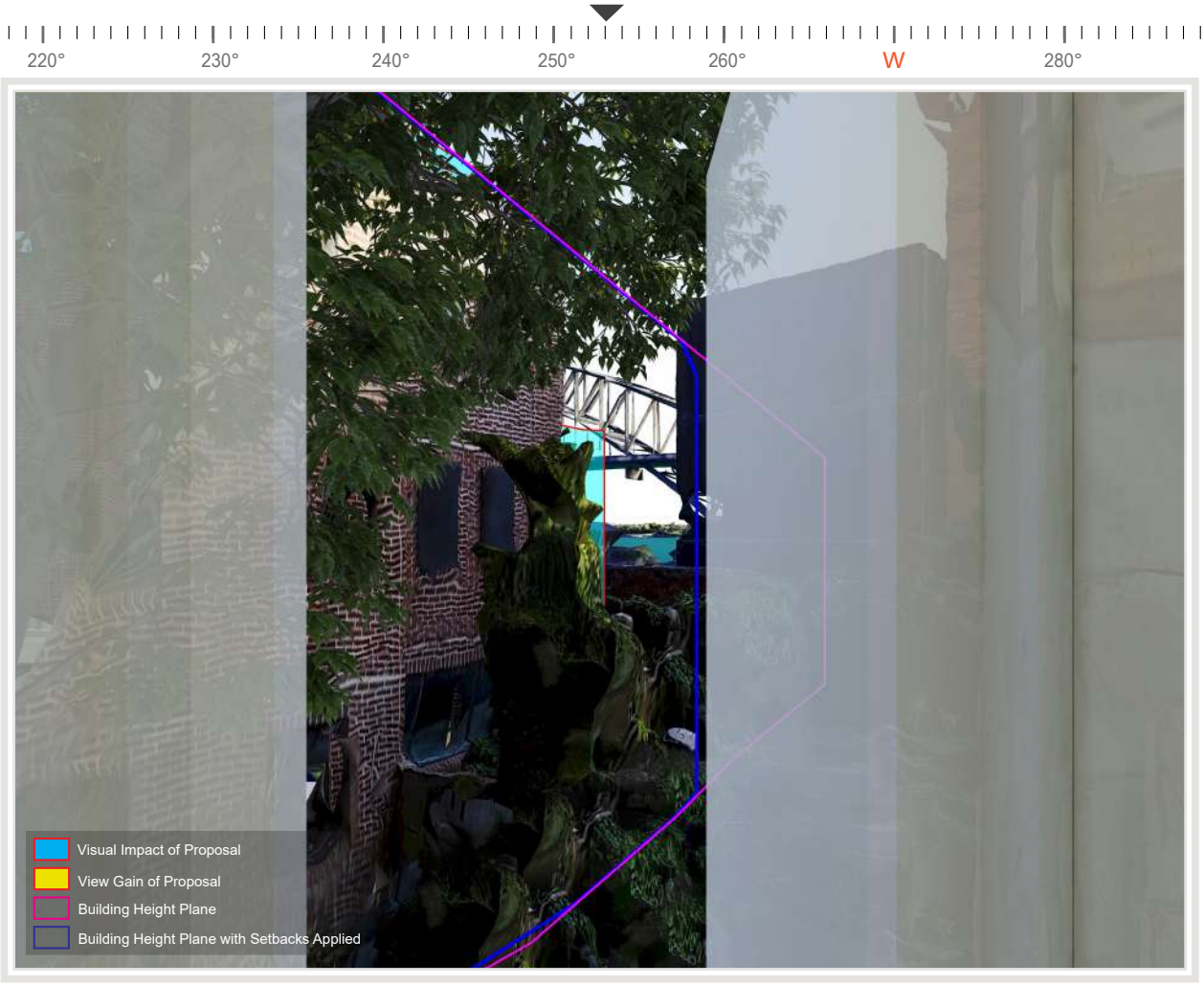
From standing position on the ground level window
RL + 18.49m - Distance to boundary 4.15m

Virtual viewpoint - 24mm



Photomontage of proposal

urbaine DESIGN GROUP



Visual impact of proposal

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 6%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 100% : 0%*
- *Existing Visual Assessment Scale no: 6 /15 & Visual Impact Assessment Scale no: 7 /15*

This static, private view is observed from the south facing ground level window within the approved residential dwelling located at No. 77 Kirribilli Avenue, facing west from standing height approximately one metre behind the glazing.

From this location the foreground view extending beyond the glazing towards the subject site at No.2, Waruda Street to the south and an aperture between no.75 Kirribilli Ave to the west. Beyond the existing building on the subject site, there is a small glimpse of water within the harbour and the foreshore of Milsons Point. Partial views above this include the structure of the harbour bridge.

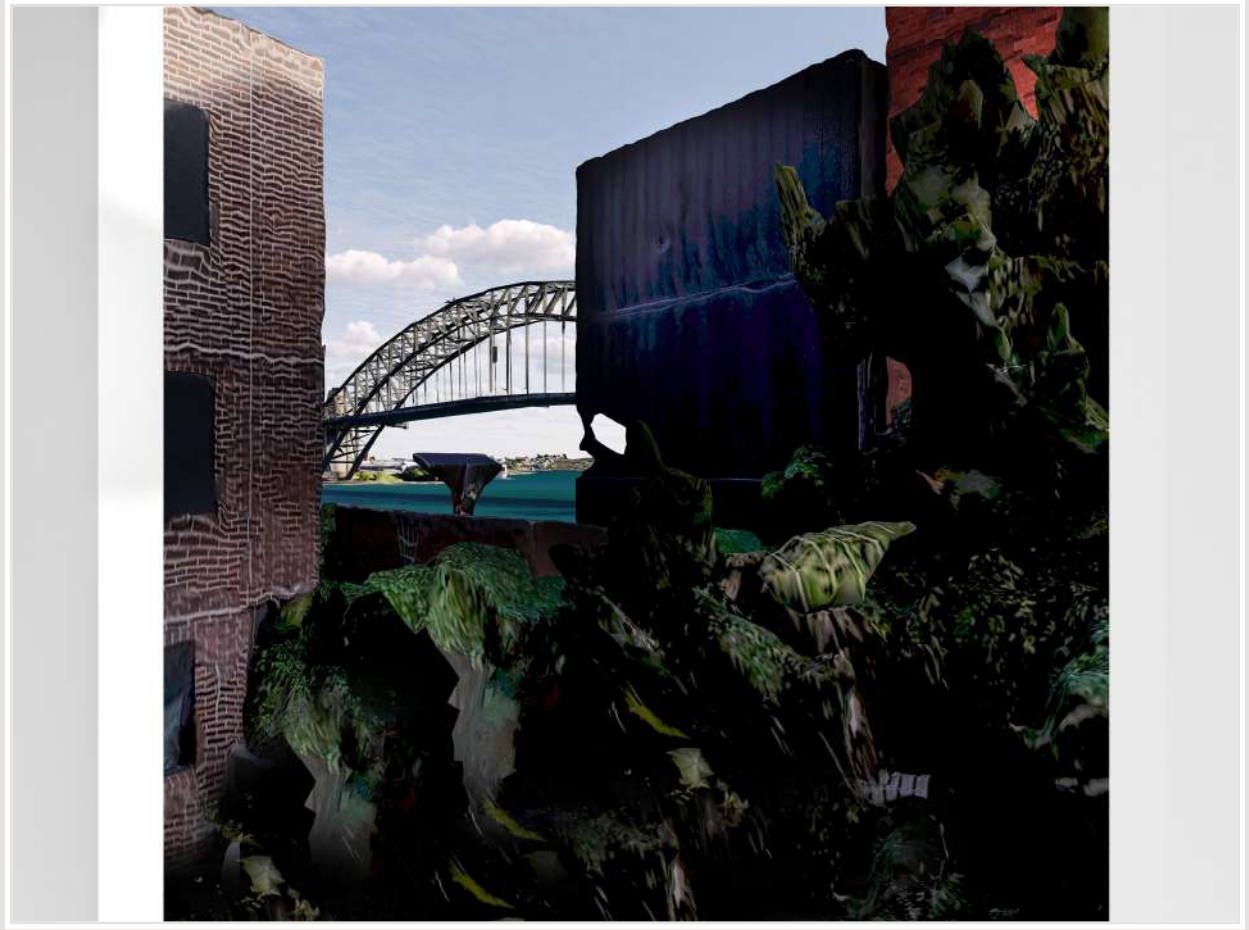
The proposed development will result in a small additional amount of visual impact to the upper elements of the bridge and to sky elements above the existing building. As the view is obtained at a high angle of incidence to the glazing line and across a side boundary the value is diminished.

Tenacity Assessment Summary:

- *Value of view: Medium.*
- *View location: Level 1 - secondary living area.*
- *Extent of impact: Minor-Moderate*

Reasonableness of proposal: Within the context of the development's height compliance, the proposal can be deemed acceptable, since the highest value components of the view remain and the amount of visual impact is not significant.

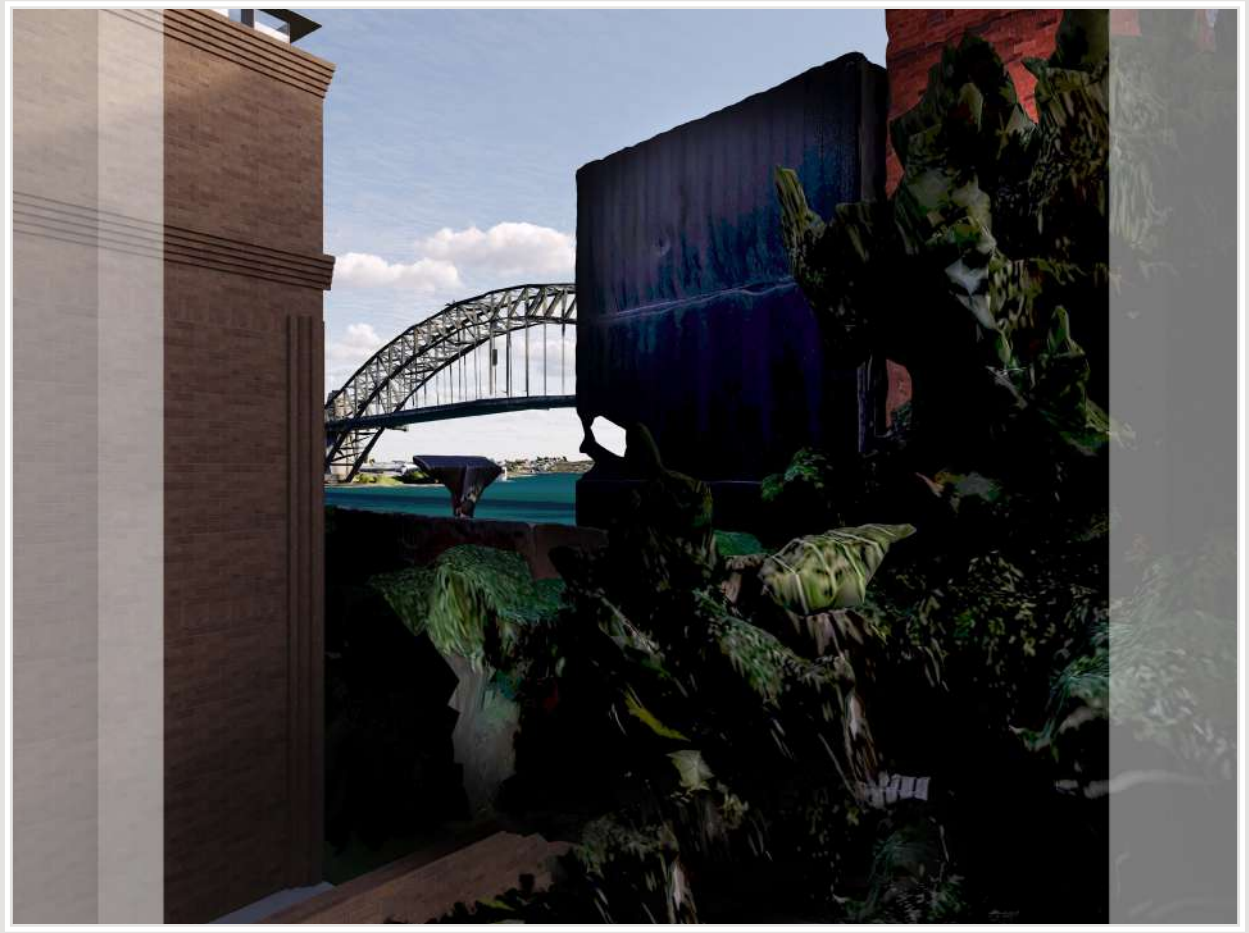
VIEWPOINT 09



Existing site photo - 77 Kirribilli Ave

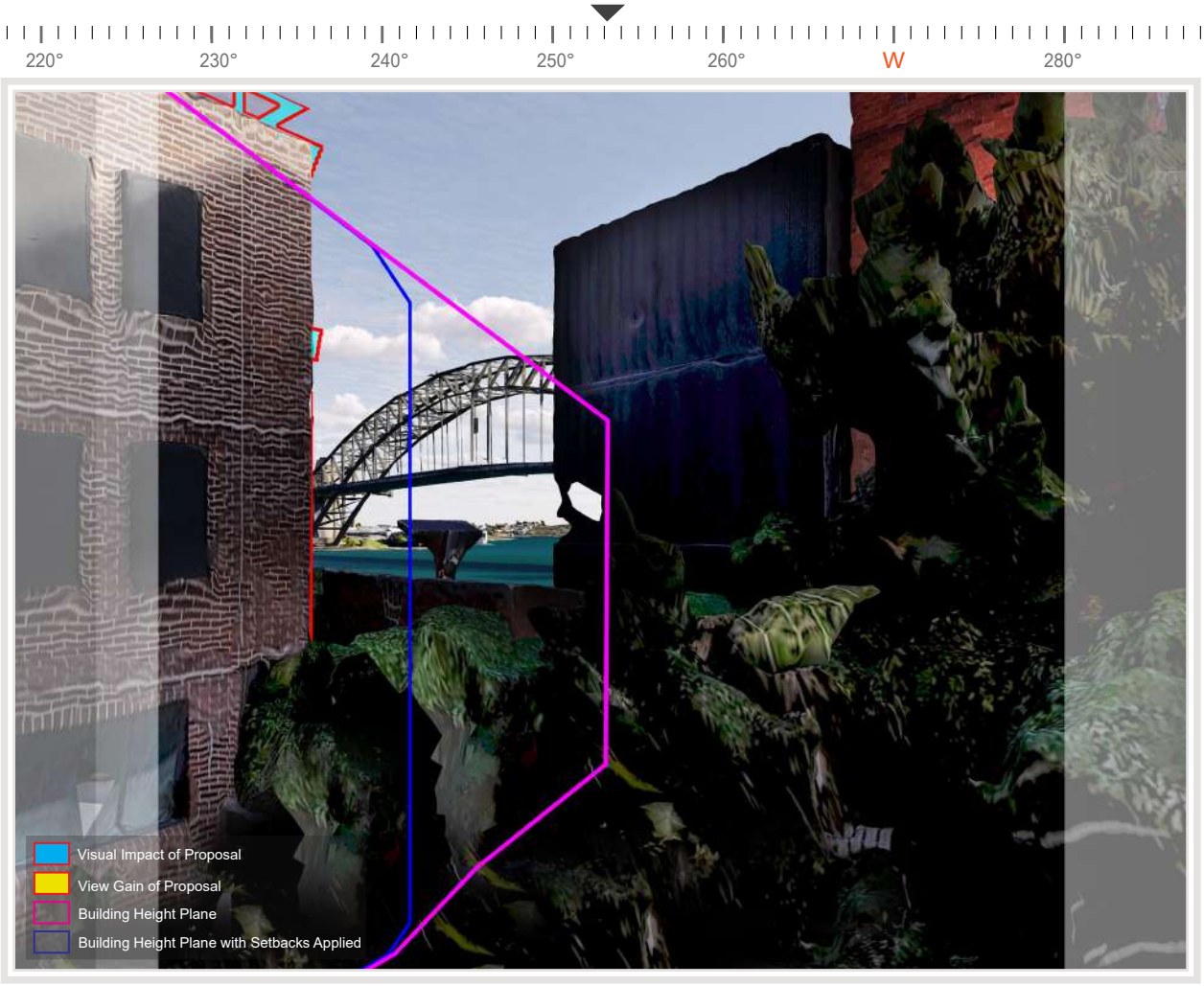
From standing position on the ground level garden
RL + 18.49m - Distance to boundary 2.63m

Virtual viewpoint - 24mm



Photomontage of proposal

urbaine DESIGN GROUP



Visual impact of proposal

Visual Impact Assessment:

- *Visual impact – Amount of new development visible in view - 4%*
- *Visual impact ratio - view loss (including buildings) : sky view loss: 100% : 0%*
- *Existing Visual Assessment Scale no: 8 /15 & Visual Impact Assessment Scale no: 1/15*

This static, private view is observed from the ground level garden area within the approved residential dwelling located at No. 77 Kirribilli Avenue, facing west from standing height.

From this location the foreground view extending beyond the glazing towards the subject site at No.2, Waruda Street to the south and an aperture between no.75 Kirribilli Ave to the west. Beyond the existing building on the subject site, there is a view of water within the harbour and partial views above this include the structure of the harbour bridge. In the far distance the southern foreshore of the inner west suburbs.

The proposed development will result in a small additional amount of visual impact sky elements above the existing building.

Tenacity Assessment Summary:

- *Value of view: Medium.*
- *View location: Garden area - secondary living area.*
- *Extent of impact: Negligible-Minor*

Reasonableness of proposal: Within the context of the development's height compliance, the proposal can be deemed acceptable, since the highest value components of the view remain and the amount of visual impact is not significant.

4. SUMMARY ASSESSMENT

This Visual Impact Assessment from Urbaine Design seeks to provide an objective approach to the likely visual impact on the surrounding areas from the development proposal at No.2 Waruda Street, Kirribilli 2061.

This Visual Impact Assessment has undertaken a review of the proposal, within its future setting and there are locations within the neighbouring properties that are impacted by the new development and concludes that:

- The relevant views, as selected within the report, are all observed from immediately adjoining properties to the north and east of the subject site.
- The assessment of view loss experienced by neighbouring residents varies between Nil to Moderate. These have been assessed in both primary and secondary living areas.
- The highest value components of the view are largely retained at all levels for the neighbouring properties.
- The highest affected viewpoints are obtained at high angles of incidence to the primary view perpendicular to the glazing line over multiple side boundary's.
- View sharing is demonstrated and maintained with distance from the setback.
- Some viewpoints have more view gain than view loss

Based on our 3D analysis, photography, and site visit it would be my recommendation that the 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

APPENDIX D: Wireframe/alignment images

APPENDIX E: Additional Images

5.1. APPENDIX B: Methodology, C.V and L.E.C Guidelines

5.2. APPENDIX C: Survey

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

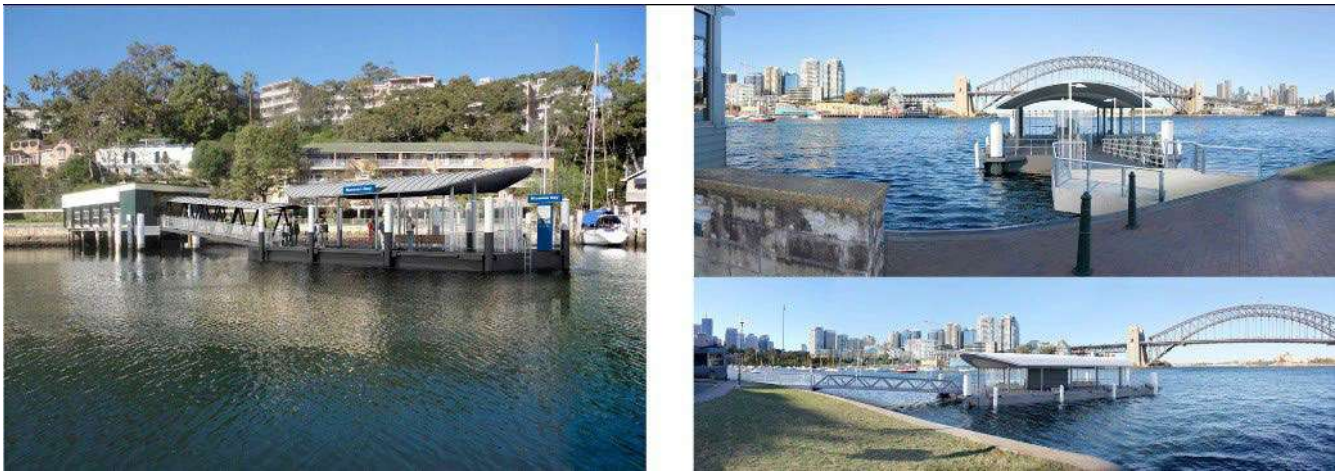
VISUAL IMPACT ASSESSMENTS: A REALITY CHECK.
BY JOHN ASPINALL.

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?

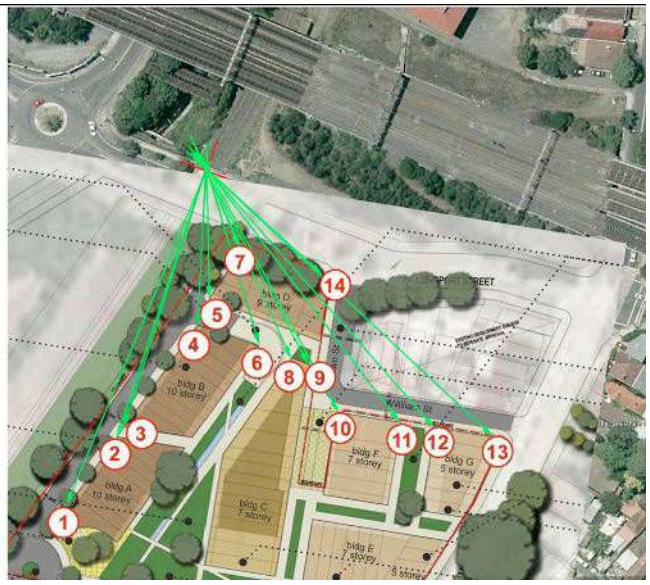
One inner west group thinks not, after inaccuracies were found in a series of digital photo montages which made the proposed Lewisham Estates development appear much smaller than it would if built.

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.

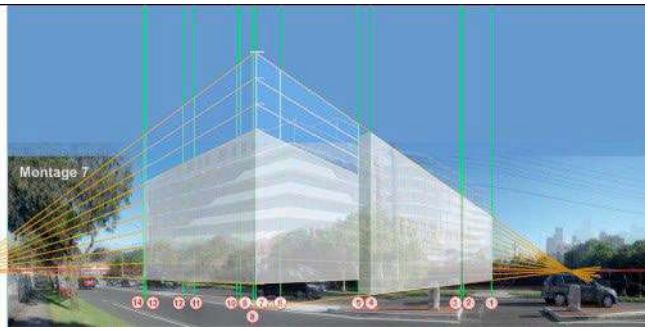
The No Lewisham Towers residents' action group claims the original images were so misleading that the corrected ones should go on public exhibition before the Planning Assessment Commission makes its determination next week.

SMH article re inaccurate visualisations



Key visual location points on site: Urbaine

Photomontage submitted by developer



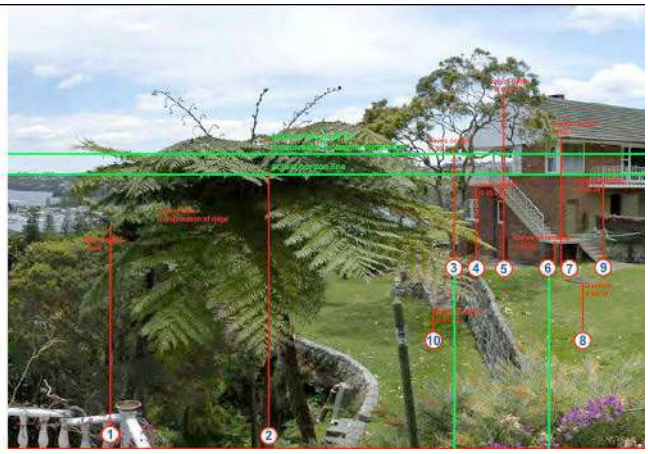
Assessment of inaccuracy by Urbaine

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.

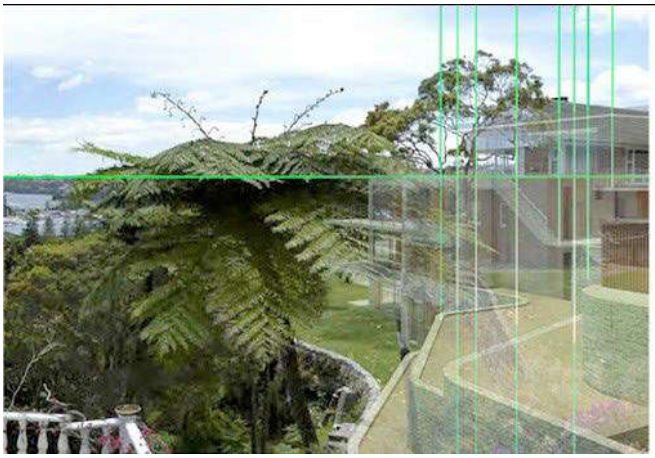
Every site presents different opportunities for verification and, often, Urbaine is required to assess montages from photographs taken by a third party. In these cases, a combination of assessing aerial photography, alongside a survey will allow reference points to be placed into the relevant 3d model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

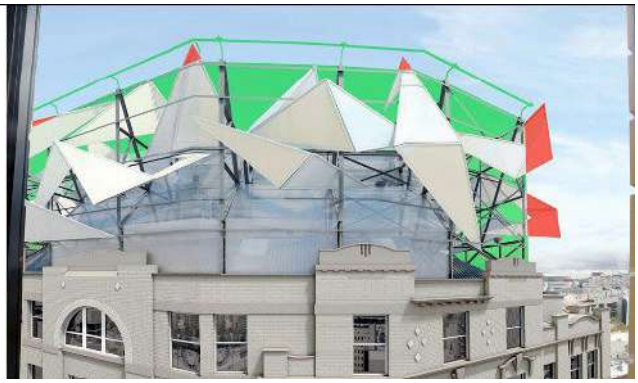
Final verified photomontage by Urbaine

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

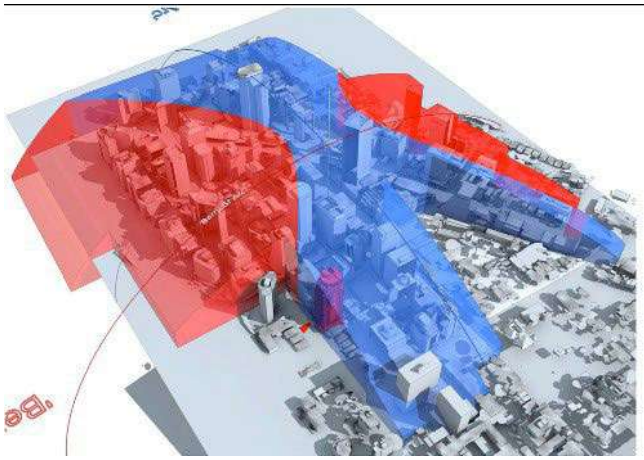
Existing situation – view from adjoining hot

Photomontage of view from hotel

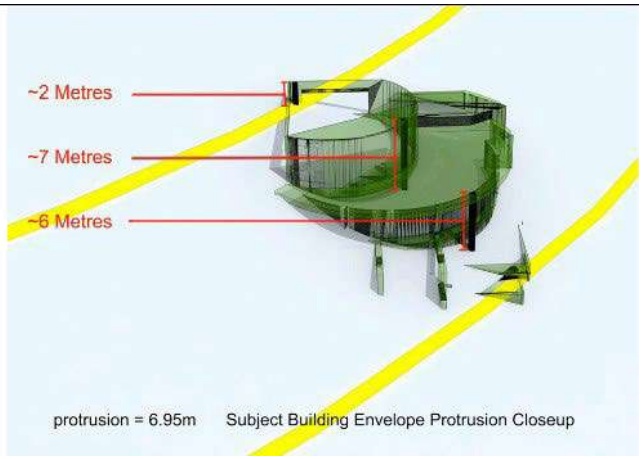


View loss – green = view gain / red = view loss

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

5.3. APPENDIX D: Wireframe images

A1

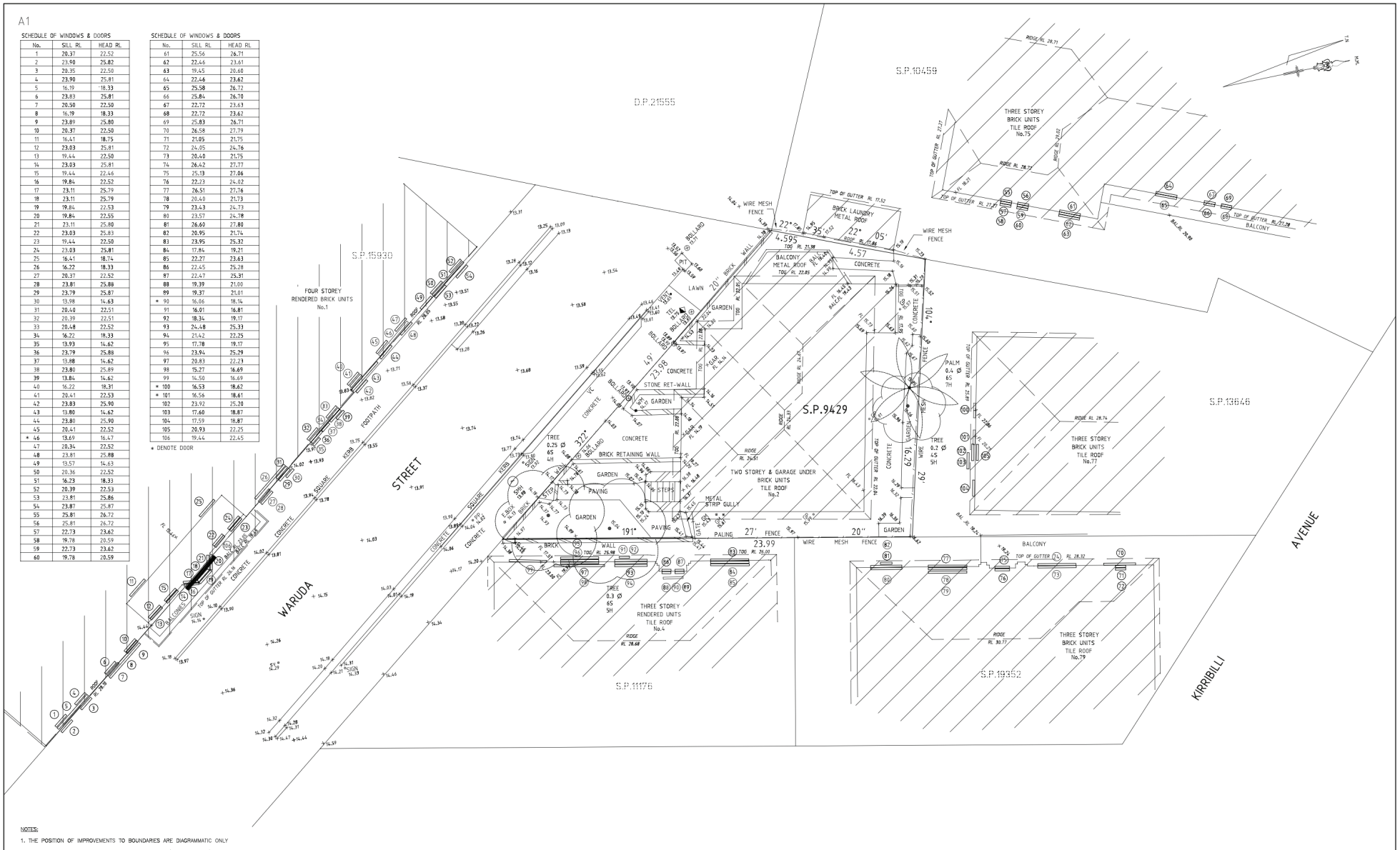
SCHEDULE OF WINDOWS & DOORS

No.	SILL RL	HEAD RL
1	20.37	22.52
2	23.90	25.82
3	20.35	22.50
4	23.90	25.81
5	16.19	18.33
6	23.83	25.81
7	20.50	22.50
8	16.19	18.33
9	23.89	25.80
10	20.37	22.50
11	16.41	18.75
12	23.03	25.81
13	19.44	22.50
14	23.03	25.81
15	19.44	22.46
16	19.84	22.52
17	23.11	25.79
18	23.11	25.79
19	19.84	22.53
20	19.84	22.55
21	23.11	25.80
22	23.03	25.83
23	19.44	22.50
24	23.03	25.81
25	16.41	18.74
26	16.22	18.33
27	20.37	22.52
28	23.81	25.88
29	23.79	25.87
30	13.98	14.63
31	20.40	22.51
32	20.39	22.51
33	20.48	22.52
34	16.22	18.33
35	13.93	14.62
36	23.79	25.88
37	13.98	14.62
38	23.80	25.89
39	13.84	14.62
40	16.22	18.31
41	20.41	22.53
42	23.83	25.90
43	13.80	14.62
44	23.80	25.90
45	20.41	22.52
* 46	13.69	16.47
47	20.34	22.52
48	23.81	25.88
49	13.57	14.63
50	20.36	22.52
51	16.23	18.33
52	20.39	22.53
53	23.81	25.86
54	23.87	25.87
55	25.81	26.72
56	25.81	26.72
57	22.73	23.62
58	19.78	20.59
59	22.73	23.62
60	19.78	20.59

SCHEDULE OF WINDOWS & DOORS

No.	SILL RL	HEAD RL
61	25.56	26.71
62	22.46	23.61
63	19.45	20.60
64	22.46	23.62
65	25.58	26.72
66	25.84	26.70
67	22.72	23.63
68	22.72	23.62
69	25.83	26.71
70	26.58	27.79
71	21.05	21.75
72	24.05	24.76
73	20.40	21.75
74	26.42	27.77
75	25.13	27.06
76	22.23	24.02
77	26.51	27.76
78	20.40	21.73
79	23.43	24.73
80	23.57	24.78
81	26.60	27.80
82	20.95	21.74
83	23.95	25.32
84	17.84	19.21
85	22.27	23.63
86	22.45	25.28
87	22.47	25.31
88	19.39	21.00
89	19.37	21.01
* 90	16.06	18.14
91	16.01	16.81
92	18.34	19.17
93	24.48	25.33
94	21.42	22.25
95	17.78	19.17
96	23.94	25.29
97	20.83	22.23
98	15.27	16.69
99	14.50	16.69
* 100	16.53	18.62
* 101	16.56	18.61
102	23.92	25.20
103	17.60	18.87
104	17.59	18.87
105	20.93	22.25
106	19.44	22.45

* DENOTE DOOR



NOTES:

1. THE POSITION OF IMPROVEMENTS TO BOUNDARIES ARE DIAGRAMMATIC ONLY
2. POSITION OF RIDGE LINES ARE DIAGRAMMATIC ONLY (NOT TO SCALE)
3. NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. RELEVANT AUTHORITIES ARE TO BE NOTIFIED PRIOR TO ANY DEVELOPMENT
4. ALL DIMENSIONS ARE BY TITLE ONLY & SUBJECT TO FINAL SURVEY
5. NO INVESTIGATIONS HAVE BEEN MADE OF BUILDING RESTRICTIONS WHICH MAY APPLY TO THIS LAND
6. ORIGIN OF LEVELS: SS 21699 RL 17.88 A.H.D.
7. THE SPREAD AND HEIGHT OF TREES SHOWN ARE INDICATIVE ONLY AND CANNOT BE SHOWN ACCURATELY WITHOUT ADDITIONAL DETAILED SURVEY.
8. BEARINGS SHOWN ARE RELATED TO MAGNETIC MERIDIAN.

LEGEND

AC	- AIR CONDITIONER	MH	- MANHOLE
DPC	- DAMP PROOF COURSE	PB	- POWER BOX
EBOX	- ELECTRICITY BOX	PC	- PRAM CROSSING
EP	- ELECTRICITY PIT	PP	- POWER POLE
FL	- FLOOR LEVEL	SMH	- SEWER MANHOLE
GM	- GAS METER	SD	- STORMWATER OUTLET
GS	- GAS SERVICE	SV	- STOP VALVE
GP	- GULLY PIT	S/W	- STORMWATER
HW	- HOT WATER HEATER	TEL	- TELECOMMUNICATIONS PIT
HYD	- HYDRANT	TSP	- TRAFFIC SIGNAL PIT
IC	- INSPECTION COVER	TL	- TRAFFIC LIGHT
LH	- LAMP HOLE	VC	- VEHICLE CROSSING
LP	- LIGHT POLE	WM	- WATER METER
		WS	- WATER SERVICE

DIAL 1100 BEFORE YOU DIG

AMENDMENT: ROAD CENTRELINE, KERB AND GUTTER LEVELS ADDED, 17/07/2015

REFERENCE: 8755-14 (KYG-NORTHLEWS)	STUTCHBURY JAQUES PTY LTD LAND SURVEYING CONSULTANTS P.O. BOX 7249, BROOKVALE NSW 2100 PH: 8976 1600 FAX: 8976 1655 E-MAIL: info@stutchbury.net.au	DATE: 23/09/2014	CLIENT: SANDBERG SCHOFFEL ARCHITECTS
		SCALE: 1:100	PROJECT: LEVEL & DETAIL SURVEY S.P.9429 No.2 WARUDA STREET, KIRRIBILLI.
		DATUM: A.H.D.	
REG'D SURVEYOR		SITE AREA: 289.7 m²	
		SHEET 1 OF 1 SHEETS	LGA: NORTH SYDNEY

urbaine DESIGN GROUP

5.4. APPENDIX E: Additional Images

Viewpoint 01

Viewpoint 02

Viewpoint 03

Viewpoint 04

Viewpoint 05

Viewpoint 06

Viewpoint 07

Point cloud with tree

Drone photo - above

Point cloud with tree - low angle

Viewpoint 02 - build form - tree removed

Viewpoint 03 - build form - tree removed