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



VISUAL IMPACT ASSESSMENT

DEVELOPMENT APPLICATION

LOT 371 IN DP 531048

77 BUNGAN HEAD ROAD, NEWPORT 2106

JUNE 6 2025

Project Type: Development Application
Lot: 371/-/DP531048
Address: 77 Bungan Head Road, Newport 2106

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1. INTRODUCTION

1.1. Scope and Purpose of Report

This Visual Impact Report has been prepared for SNC and is submitted to the Northern Beaches Council in support of a Development Application (DA) for a Residential Flat Building at 77 Bungan Head Road (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.

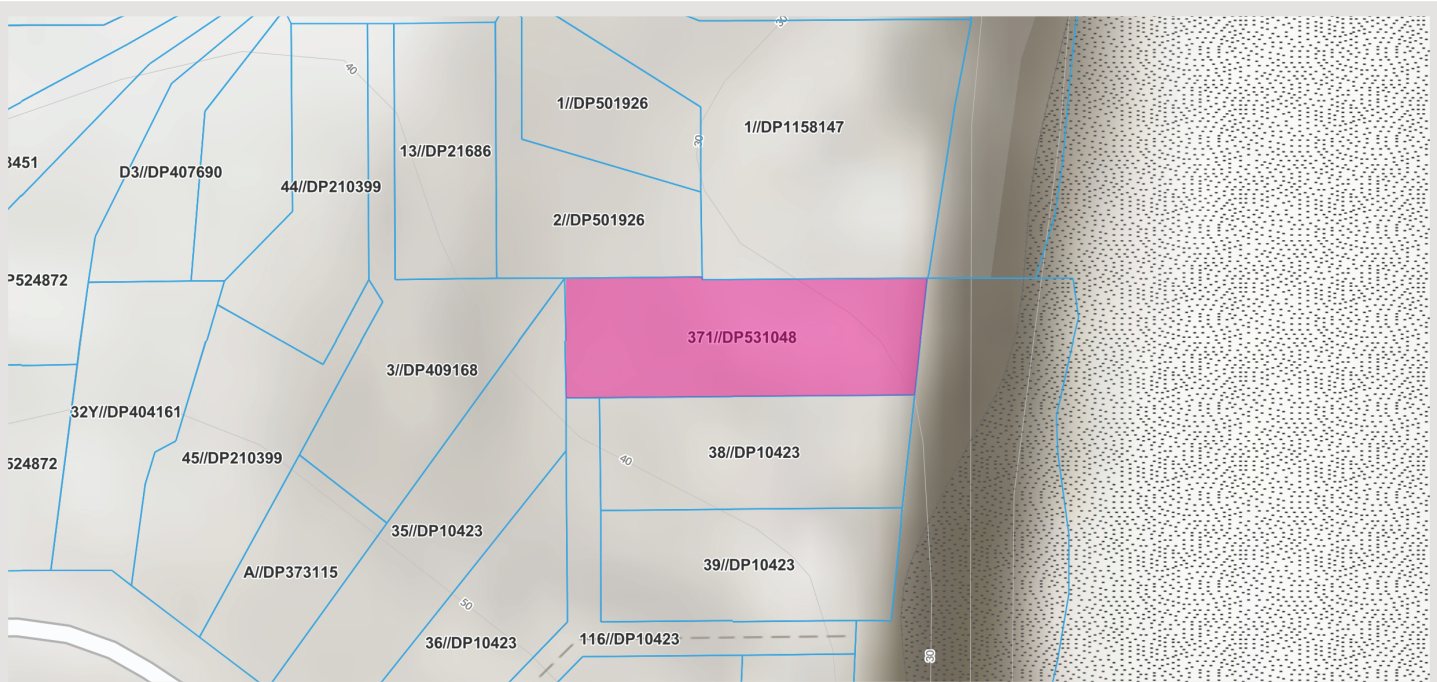


Figure 1 – Site location shown in magenta

1.2. The Proposed Development

The proposed development comprises

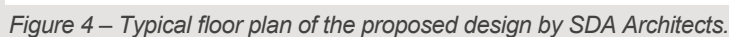
1.2.1. The Site and existing property

The site has a legal description of Lot 371 in DP 531048 and is known as 77 Bungan Head Road, Newport. It is also known as 6a Lovering Place, Newport. The site access is provided from Lovering Place.

The site is rectangular shaped allotment and is accessed via a right-of-carriageway from Lovering Place. This site has a total area of 1334m².

The physical and topographical characteristics of the site are depicted on the site survey. The topography has a gentle slope with an easterly aspect at an average gradient of ~10°. At the eastern boundary the topography has a vertical drop down to the rock shelf below. The lawned areas have been terraces and filled with associated retaining walls.

The existing development comprises a part 1 & 2 storey brick dwelling. Developments adjoining the subject site comprise relatively recent constructions of large residential dwellings.



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, SDA Architects and aligned to the scene using the survey information from Byrne & 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.

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.

1.4.2. 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:

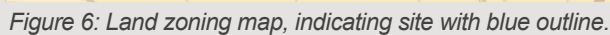
- *Environmental Impact Assessment Practice Note, Guideline for Landscape Character and Visual Impact Assessment (EIA-N04) NSW RMS (2013);*
- *Visual Landscape Planning in Western Australia, A Manual for Evaluation, Assessment, Siting and Design, Western Australia Planning Commission (2007);*
- *Guidelines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

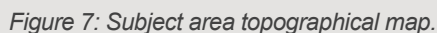


Visual impacts occur within an existing visual context where they can affect its character and amenity. This section of the report describes the existing visual context and identifies its defining visual characteristics.

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.



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.

The immediate surroundings of the site feature a diverse range of predominantly standalone dwellings. These buildings showcase a blend of architectural styles, encompassing both traditional and contemporary designs. The area's development history spans different eras, leading to a mixture of construction materials and finishes. As a result, the buildings exhibit varying setbacks from the public domain, contributing to the overall eclectic character of the neighbourhood. Houses and vegetation in the vicinity of Burke Street, Bungan Head Road, Prince Alfred Parade, Queens Parade and Myola Road, indicative of early settlement in the locality, have been identified as heritage items.

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 east and the ocean views.

2.3. Streetscapes

Within the immediate and surrounding areas, the streetscapes are typical of the suburbs of beachside suburbs being a mixture of individual houses and small apartments blocks of varying scales. The locality is characterised by the steep slopes to the north and south, and valley floor. Due to the topography, significant views can be obtained through all points of the compass. Conversely, the slopes and ridge tops of the locality are visually prominent.

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 residential properties to the south and east 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 2 viewpoint locations – from 75 Bungan Head Rd

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

Figure 8: Urbaine Group Assessment Table

3.1.1. Assessment at selected viewpoints

VIEWPOINT 01



Existing site photo - 75 Bungan Head Road

From standing position on the upper terrace
RL +36.78m - Distance to boundary 7.24m

Camera - Canon RP
Lens - 24mm



Photomontage of Proposal



Visual impact in cyan with red outline, view gain in yellow

Visual Impact Assessment:

- Visual impact – Amount of new development visible in view - 31%
- Visual impact ratio - view loss (including buildings) : sky view loss: 97% : 3%
- Existing Visual Assessment Scale no: 12 /15 & Visual Impact Assessment Scale no: 9 /15

This private upper-level terrace view from No. 75 Bungan Head Road faces north from standing height, one meter behind the balustrade. The foreground extends over the private terrace and glass balustrade toward the posterior yard and subject site at No. 77 Bungan Head Road, positioned in the mid-ground. The site sits in the western periphery, allowing limited coastal views. The background features No. 6 Lovering Place, surrounded by mature trees, and the South Bilgola Headland Viewing Platform, visible due to the curved ridgeline topography. The eastern half is dominated by the open waters of Newport, serving as a focal visual element due to its expansiveness and proximity to surrounding residences.

The visual impact for the proposal, from this location will result in a lateral view loss, spanning from the central mid ground westwards. The view loss from this location relates to lateral residential views in addition to a complete concealment of coastal Newport. The water element views are for the most part retained, as is the sky element. As such, the extent of view impact from this location can be assessed as Moderate.

Tenacity Assessment Summary:

- Value of view: High
- View location: Private terrace
- Extent of impact: 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 visual impact responds to requirements for view-sharing.

VIEWPOINT 02



Existing site photo -

From standing position on the upper terrace
RL +37.14m - Distance to boundary 13.06m

Camera - Canon RP
Lens - 24mm



Photomontage of Proposal



Visual impact in cyan with red outline, view gain in yellow

Visual Impact Assessment:

- Visual impact – Amount of new development visible in view - 23%
- Visual impact ratio - view loss (including buildings) : sky view loss: 100% : 0%
- Existing Visual Assessment Scale no: 12 /15 & Visual Impact Assessment Scale no: 6 /15

This private upper-level terrace view from No. 75 Bungan Head Road is slightly set back from the balustrade, facing north. The foreground includes the existing balustrade, leading toward the subject site in the western periphery, where only roof elements are visible.

The view extends across private shore-facing yards, reaching the neighboring property at No. 6 Lovering Place, partially obscured by lush mature trees contributing to its landscaped surroundings. The curved topography follows the water element of Newport, dominating the eastern visual factors. Due to this terrain, further neighbouring properties are concealed, with South Bilgola Headland Viewing Platform remaining visible as a topographical protrusion marking the curvature's conclusion.

The visual impact of the proposal, from this location will result in a lateral view loss, prevalently observed in the western visual corridor. The view loss from this location will relate to immediate residential and coastal views of Newport. The water element views from this location are, for the most part, retained. As such, the extent of view impact from this location can be assessed as Minor to Moderate.

Tenacity Assessment Summary:

- Value of view: High
- View location: Private external terrace
- Extent of impact: Minor to 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 visual impact responds to requirements for view-sharing.

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 77 Bungan Head Road, Newport 2106.

This Visual Impact Assessment has undertaken a review of the proposal, within its future setting and concludes that, although there are locations within the neighbouring properties that are impacted by the new development, the relevant views, as selected within the report, are all observed from no.75 Bungan Head Road, Newport 2106., which is the house to the rear of the subject site.

The assessment of view loss experienced by residents across 2 levels of the house vary between Moderate and Moderate-to-Severe. These have been assessed in both primary and secondary living areas. The highest value components of the view are significantly retained at the upper level of the neighbouring property.

Since the proposal is largely compliant, it satisfies the Council's guidelines for view-sharing between neighbouring properties.

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

JOHN ASPINALL. director: urbaine design group

UK Qualified 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 visualisation 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 photomontages began in 1990 and has included work for many of the world's leading architectural practices and legal firms.

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Expert Legal Witness, 2005 to present

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.

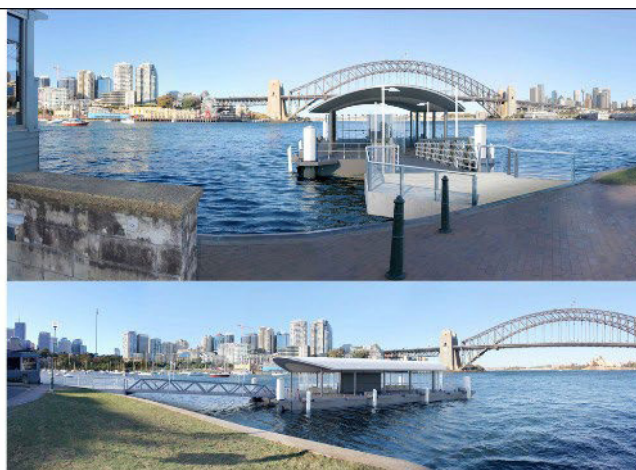
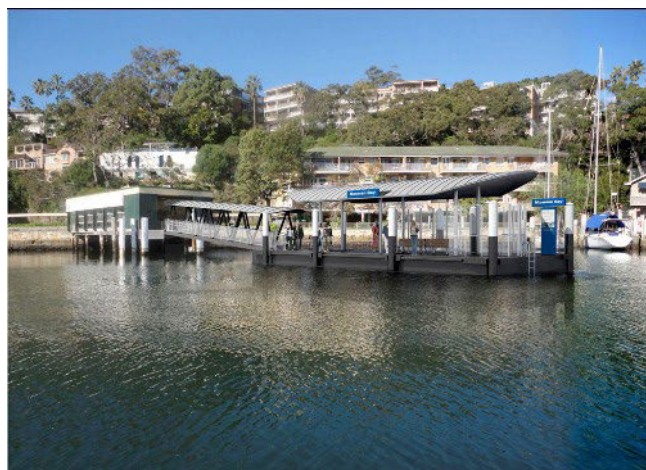


Photomontaged views of new apartment building at Pyrmont: Urbaine

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's training, prior to the introduction of CAD and 3d modelling, a good understanding of the principles of perspective, light, shadow and building articulation, were taught

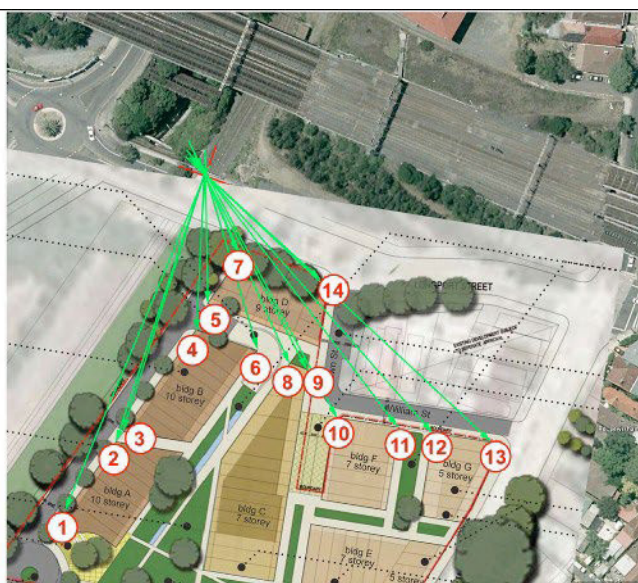
throughout the training of architects.

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.

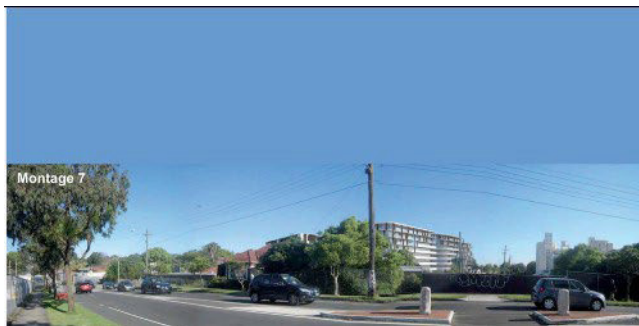
Currently, the Land and Environment Court specifies that any photomontages, relied on as part of expert evidence in Class 1 appeals, must show the existing surveyed elements, corresponding with the same elements in the photograph. Often, any surveyed elements can form such a small portion of a photograph 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%.



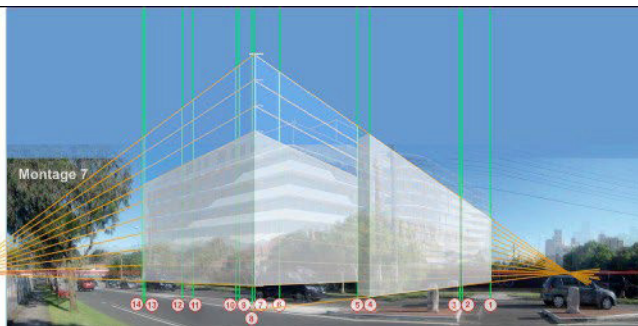
SMH article re inaccurate visualisations



Key visual location points on site: Urbaine



Photomontage submitted by developer

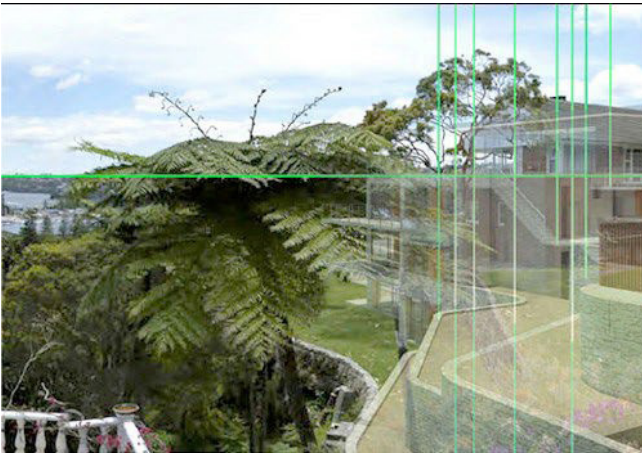
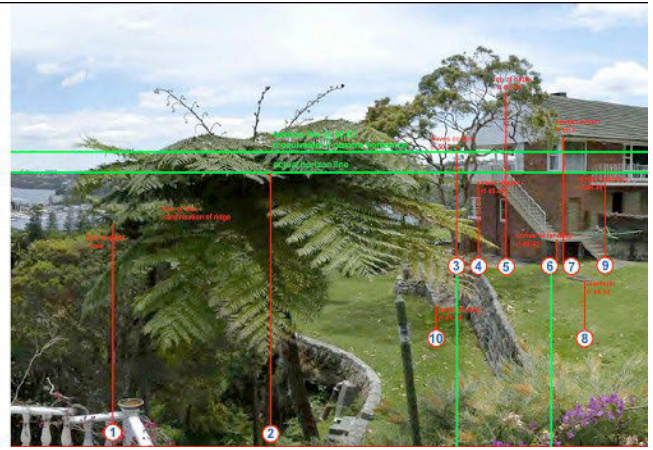


Assessment of inaccuracy by Urbaine

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.



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.





Proposed buildings and landscape mounding applied

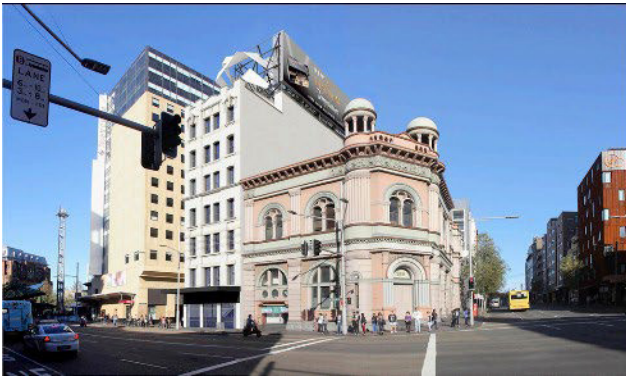


Proposed landscape applied – shown as semi-mature

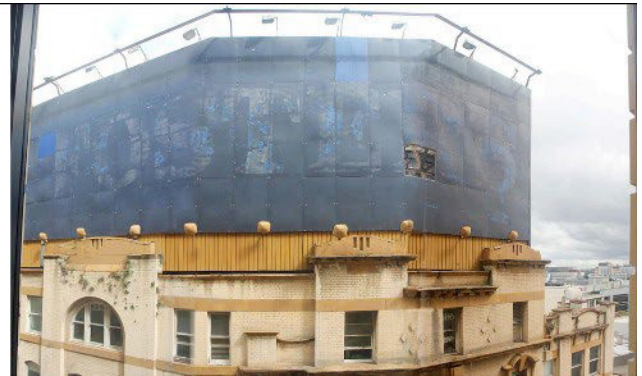


Final verified photomontage by Urbaine

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 hotel

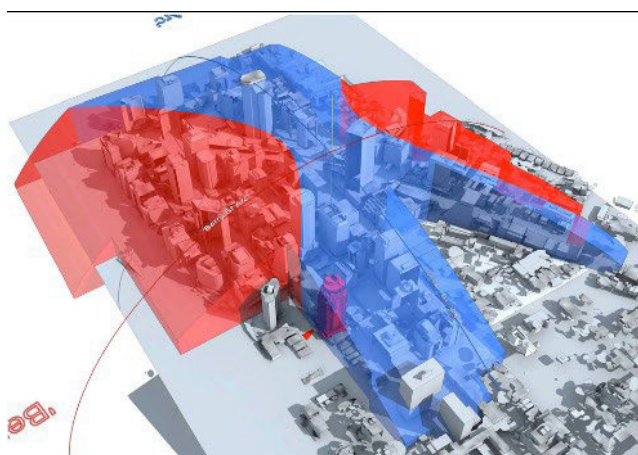


Photomontage of view from hotel

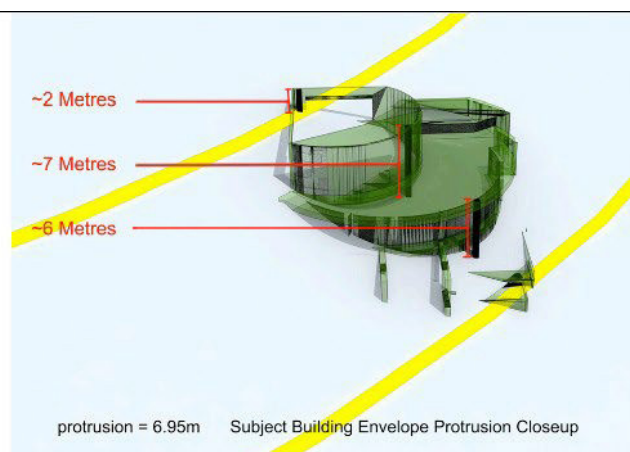


View loss – green = view gain / red = view loss

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 placed 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.



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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*.



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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.



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- 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***



