# VISUAL IMPACT ASSESSMENT

## 136 - 148, Donnison Street, Gosford, NSW

March 2020

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# Proposed Mixed Use Development : 'Gosford Alive': 136-148, Donnison Street, Gosford, NSW.

## Visual Impact Assessment Report
## April, 2020.

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# 1. INTRODUCTION

1.1 Scope and Purpose of Report.

This Visual Impact Report has been prepared by Urbaine Architectural for Lederer Group Pty Ltd. The report is provided to accompany the Development Application on a site located between Kibble Park and the Rumbalara Reserve – 131-148, Donnisons Street, Lot 6 DP598833 (the Project Site), located in B4 zoned land to the east of the Gosford CBD. The subject site is approximately 14,195sqm and slopes progressively up from west to east.

Figure 1 – Aerial photograph of Gosford, with site location shown in red.

The SEARs issued for the project proposal require the preparation of an assessment of the visual impact of the new proposal from a series of nominated viewpoints in publicly accessible locations. In particular a comparison is required between the impact of existing heights and setbacks, defined under the GCC SEPP and the envelope uplift available under Clause 8.4. In each case, a photographic assessment has been shown for both envelopes.
This visual assessment has been prepared in accordance with relevant sections of the *Environmental Impact Assessment Guidance Note: Guideline for landscape character and visual impact assessment* (EIA-N04) (Roads and Maritime, 2018).
Photomontages prepared by Urbaine Architectural that illustrate the visual impact of the proposed development from the viewpoints nominated in the SEARs, are incorporated in the Report. Details of the methodology used to prepare the photomontages are included below.
The potential visual impact of the proposed development on the nominated viewpoints ranges from low to high, depending on the distance of the view, extent of screening by other buildings and vegetation, and the level of visual sensitivity of the viewers.
The new development is subject to the guidelines of the Gosford Urban Design Framework and the Gosford DCP, 2018. To date, the result of these planning instruments has been the construction of several multi-storey residential buildings along the central spine of Mann Street, both to the east and west.
Mann Street forms the primary north-south road corridor through the centre of Gosford with views to the north, typically framed by adjoining commercial buildings while views to the south are generally blocked by the large trees associated with the War Memorial and Poppy Park. The north-south alignment of Mann Street, combined with the existing topography, has resulted in a series of cross streets that slope upwards progressively to the east and Rumbalara Reserve. The slope of these cross streets provides opportunities for views to the west along the street corridors. Views along the cross streets will contrast with the more visually enclosed character that will result from the proposed new high-rise buildings on both sides of Mann Street. However, the sloping topography will provide opportunities for view corridors to be maintained between the buildings in any new developments to reduce the level of visual enclosure for pedestrians and motorists moving along Mann Street.
Central Coast Stadium forms a visually prominent and distinctive structure located on the waterfront of Brisbane Waters. The flat public open space adjoining the waterfront of Brisbane Waters provides

many opportunities for open views to the south across the water surface of Brisbane Waters to forest covered hills and ridges along the foreshore. These open spaces also provide views of the prominent hills adjoining the commercial centre of Gosford to the east and west, namely Presidents Hill to the west and Mount Mouat to the west.

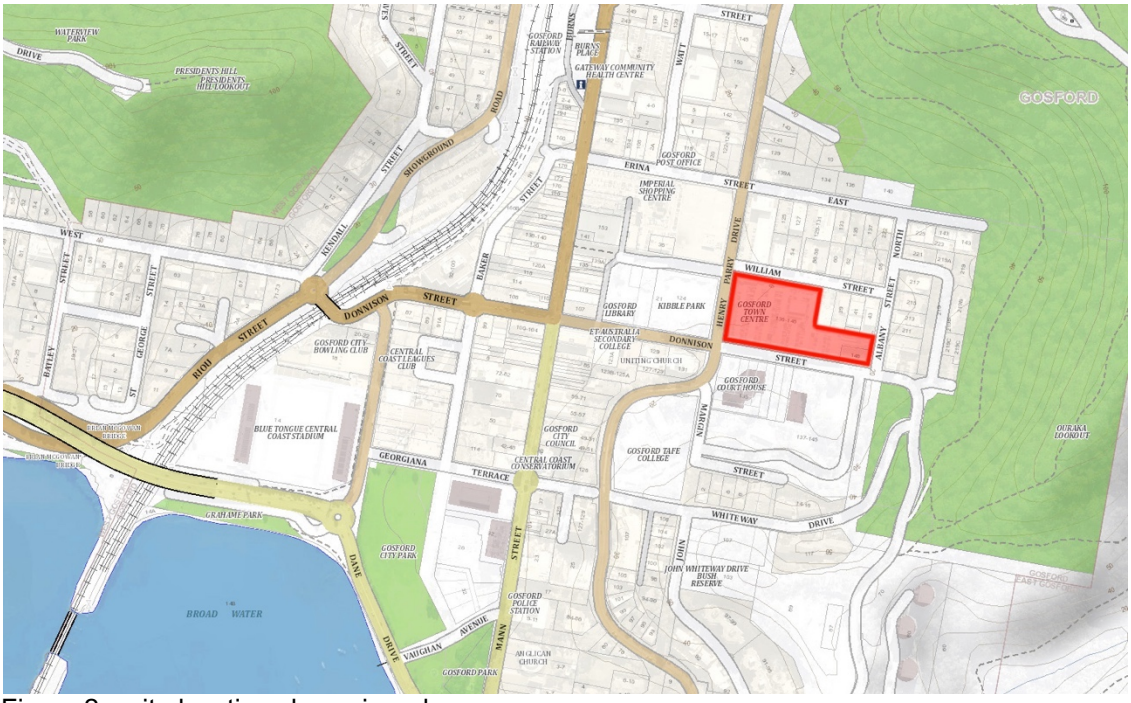


Figure 2 – site location shown in red.

Lederer Group P/L proposes a mixed use development at 136-148, Gosford that would incorporate commercial, retail (including food and drink premises), and residential accommodation. The regional context of the project site to the north of Gosford commercial centre, near Rumbalara Reserve, is illustrated in Figure 2. The land zoning of the subject site and adjoining sites is indicated in Figure 3.

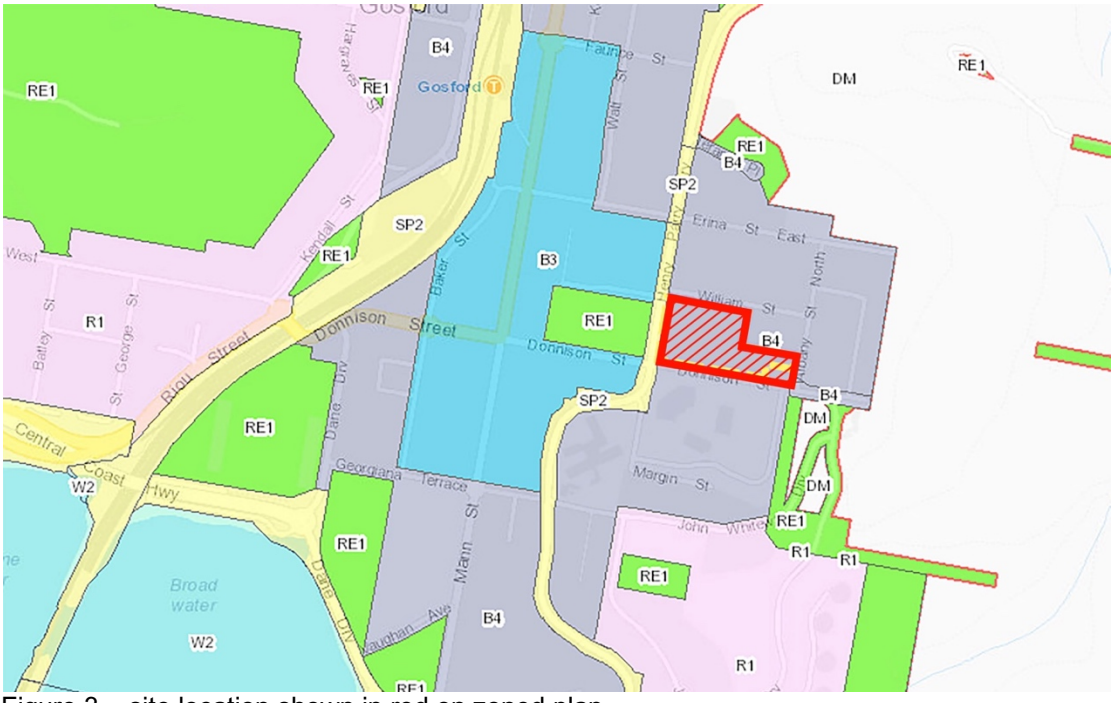


Figure 3 – site location shown in red on zoned plan.

This 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. The Report is being submitted to assist in assessing the proposed development.

## 1.2 The Proposed Development

### 1.2.1 Project Overview

The proposed development, designed by Buchan Group, Sydney, is detailed in the plans and Statement of Environmental Effects that accompany this application.
It consists of the development of the site with construction of a number of separate residential towers, with retail and other amenities located at podium level.

The design is composed of five buildings, ranging in height from RL 73.1 to RL 110.3 (approximately 20 to 30 storeys). See Figure 3 for artist's impression of poropsed development.
Car parking is partly below and partly above ground with approximately 1,014 parking spaces; Vehicular access points are located on William Street, Donnison Street and Albany Street North, with a shared vehicle-pedestrian through-site link between William Street and Donnison Street.

The proposal is for mixed-use, including residential apartments (approximately 738) in tower levels and commercial premises, parking and townhouse-style development in the podium levels.
This mix of uses reflects the desired outcome for the site as a predominantly residential development, supported by lower level commercial uses concentrated at the Henry Parry Drive frontage. Whilst relatively centrally located, the predominant area of the site is set back and away from the town centre, thereby reducing opportunities for substantial commercial floor space. Nonetheless the key frontage to Henry Parry drive will be activated with commercial type land uses, with a predominant active frontage to Dennison Street. The proposed envelopes are arranged in a manner that optimizes solar access to Kibble Park, whilst also preserving views to Rumbalara Reserve and maximising residential amenity, in terms of solar access and natural ventilation.
At ground level, the design creates a 24m wide 'shared zone' through-site link, in addition to a large pedestrianised zone along Henry Parry Drive.
There are generally 24m separations between all towers, consistent with Apartment Design Guide criteria. Additionally, the proposed towers are arranged to step down from east to west, with the highest point being RL 110.3 at the eastern end of the site and the lowest point being RL 73.1 at the eastern end. The proposed maximum heights are outlined below.
Tower 1: RL 88.6 | 78.5m above ground (19-storey tower + podium)

Tower 2: RL 73.1 | 60.2m above ground (16-storey tower + podium)

Tower 3: RL 91.7 | 79.4m above ground (21-storey tower + podium)

Tower 4: RL 101 | 85.9m above ground (24-storey tower + podium)

Tower 5: RL 110.3 | 94m above ground (27-storey podium + podium)
The tower heights seek to have compatibility with other developments currently being proposed in, and around the Gosford CBD. In particular, the Mariners Development (98m above ground) and Waterside Towers (114m above ground). The new proposal's tower heights demonstrate clear compatibility with these 2 other developments.
The landscaping proposals further seek to integrate the new development into the Gosford ground plane and also respect the native flora in the vicinity. Key features of the landscape design include: A continual east-west link/pathway through the site connecting users to Rumbalara Reserve in a visual and symbolic way. A north-south shared through-site link (vehicles and pedestrians) connecting William Street and a large urban forecourt area fronting Henry Parry Drive directly opposite Kibble Park. Plantings which are responsive to elevation and aspect, multiple large water features, ample informal seating areas, communal dining zones and considered level changes, resulting in a unique experience for the user.

Figure 4 is a visual representation of the Buchan design. As will be observed, the openness of the elevations at podium level assist is creating a façade within which glazed void exceeds solid, resulting in a visual lightness, enhanced by the reflections of mature landscaping in Kibble Park, in addition to the new trees around the perimeter. The sense of visual activation and pedestrian engagement helps significantly in integrating the functions of the podium into the existing fabric of this area of Gosford. The top of the podium is then softened with overflowing landscaping, which ties into the upper levels of the surrounding trees, providing a soft visual base from which the towers forms can evolve. The corners of the main towers are a combination of open balconies and, in some instances, curved glazing. Both of these architectural features allow the edges of the building to integrate more gently into the sky behind, softening the edges and helping to break down the overall visual mass.

figure 4 – Visualisation of proposed design – from corner of William St and Henry Parry Drive.

### 1.2.2 The Site

The site, at 136-148, Donnison Street, Gosford, is bordered by William St to the north, Albany St N to the east, Donnison St to the south and Henry Parry Drive to the west. It is currently developed as a 2 level car park, with an open upper deck, providing parking for workers and shoppers in the central area of Gosford. Its proximity to Kibble Park is of particular relevance in the assessment of any visual impact, since this is a highly trafficked area for the local community.

### 1.2.3 Proposed Land Use and Built Form

The proposed design ensures the development is contained within the building envelope defined in the planning guidelines established for new developments, entitled 'Gosford Alive'. This will be described and documented in accompanying documents from Buchan Group and Mecone Planners. The design and land use also seeks to respond to the general aims and objectives of the Gosford SEPP and DCP, particularly in relation to its designated zoning within the 'Civic Heart' precinct, as defined in the DCP. The DCP provides new controls for protecting views from the public domain to the ridgeline of Rumbalara Reserve, particularly for larger sites, This is to assist in the DCP objective of "Connecting to a beautiful natural setting to make a thriving city'. Additionally, within the Civic Heart precinct, there is an obligation to enhance the quality of three major important public spaces, namely Kibble Park, Leagues Club and Mann Street. These spaces are deemed essential to the city's success in terms of the activation of opens spaces and public amenity.
The DCP has also identified six key sites that, because of their size, have the potential to provide new public domain, including the subject site. Within the DCP are principles to help guide the design process, which have formed the basis of the approach by Buchan Group.
The design objectives for the Civic Heart precinct include:

- The protection of view corridors to Presidents Hill and Rumbalara Reserve.
- Maintaining solar access and amenity to Kibble Park.
- Promoting a diversity of built form and high quality mixed use developments.
- Promoting new commercial development in the core for job growth and to protect Gosford's role as a regional city and associated regional functions.

The design on the subject site satisifies these broad objectives, through design, function and integration into the urban fabric.

## 1.3 Methodology

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 C. A combination of the methods described were utilised in the preparation of the photomontaged views, used in this visual impact assessment report. This same methodology is currently under review by the Land and Environment Court as a basis for future VIA guidelines to supercede the current instructions.

### 1.3.1Process

Initially, a fully contoured 3d model was created of the immediate site and surrounding buildings to the extent of the designated viewpoints., with detailed block modelling matching the building envelope of the latest Buchan Group design of the residential buildings and associated interaction with the surrounding site.
Virtual cameras were placed into the model to match various selected viewpoints, in both height and position. From these cameras, rendered views have been generated and photomontaged into the existing photos, using the ground plane for alignment (allowing a set camera height of 1600mm). Several site location poles were placed into the 3d model to allow accurate alignment with the original photo. These poles align with known elements, such as trees, lamp posts, existing roof lines etc. Figure 4 shows the selected viewpoint locations.
The rendered views create an accurate interpretation of the visual impact and provide a basis for minimising any view loss by the incorporation of amended building heights and landscape, where appropriate.
The final selection of images shows these stages, concluding with an outline, indicating the potential visual impact, with and without landscaping. In addition, Appendix A contains ‘full context’ 120 degree panoramic photos from each location. It is from these that a better understanding can be gained, regarding the visual impact in the overall urban context, although for the purposes of statutory requirements, the images within the report are of a standard lens format.
The Visual Impact Assessment includes detailed evaluation of views from the locations listed in the SEARs and supplementary viewpoints nominated by DPIE. All of these viewpoints are located at publicly accessible places and include:

- Georgiana Terrace
- Brian McGowan Bridge
- Gosford Waterfront
- Leagues Club surrounds
- Central Coast Highway
- Henry Parry Drive
- Mann Street
- Gosford railway station
- Kibble Park
- Gosford Wharf

### 1.3.2 Assessment Methodology

There are no set guidelines within Australia regarding the methodology for visual impact assessment.
Although several specific cases are used as examples (for example, Rose Bay Marina v Woollahra Council), these are specific to the site and project location. Also, there is no peer review system for visual impact assessments. As a result, Urbaine Architectural provides a detailed description of its methodologies and the resultant accuracy verifiability – this is contained within Appendix C.
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 viewpoint locations for local visual impact assessments. These were selected to respond to the 'context' assessments, as described later.

Site Inspections

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

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

The maps, see figures 5 and 6, indicate chosen locations for site photography. The relevant photos from the full selection are shown in Figure 7 and contained in Appendix B.

Figure 6: Selected distant viewpoint locations for visual impact assessments. These were selected to respond to the ‘context’ assessments, as described later.


Figure 7: Locations of all site photography contained in Appendix B. These formed the collection of photos from the site inspection, from with the final viewpoints were selected.

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

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

Statutory Planning Assessment
The visual impacts were assessed in relation to the applicable provisions of the Gosford City Centre SEPP (2018) and DCP.
The results of the local view impact assessment are included in Section 3 of this report, with large format images included in Appendix A.

### 1.4 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 The Project Architects: Buchan Group, of Level 1, 53, Walker Street, North Sydney 2060
Statutory Planning
■ Creating Places for People - An Urban Design Protocol for Australian Cities:
www.urbandesign.gov.au/downloads/index.aspx/
■ Australia and New Zealand Urban Design Protocol:
www.mfe.govt.nz/publications/urban/design-protocol-mar05/urban-design-protocol-colour.pdf
■ The Value of Urban Design:
www.designcouncil.org.uk/Documents/Documents/Publications/CABE/the-value-of-urban-design.pdf
■ Fifteen Qualities of Good Urban Places:
www.goldcoast.qld.gov.au/planning-and-building/fifteen-qualities-of- good-urban-places-3774.html
■ The Image of the City (1960), Kevin Lynch

## 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. These issues are discussed below in relation to the Gosford City Centre SEPP (2018) objectives and provisions. 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. Within the scope of this report the public realm is considered to include the public roads, reserves, open spaces and public buildings. Additional views are sometimes also available from other “semi-public” spaces, such as private shopping centres, education buildings, or recreational and hospitality facilities.
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.

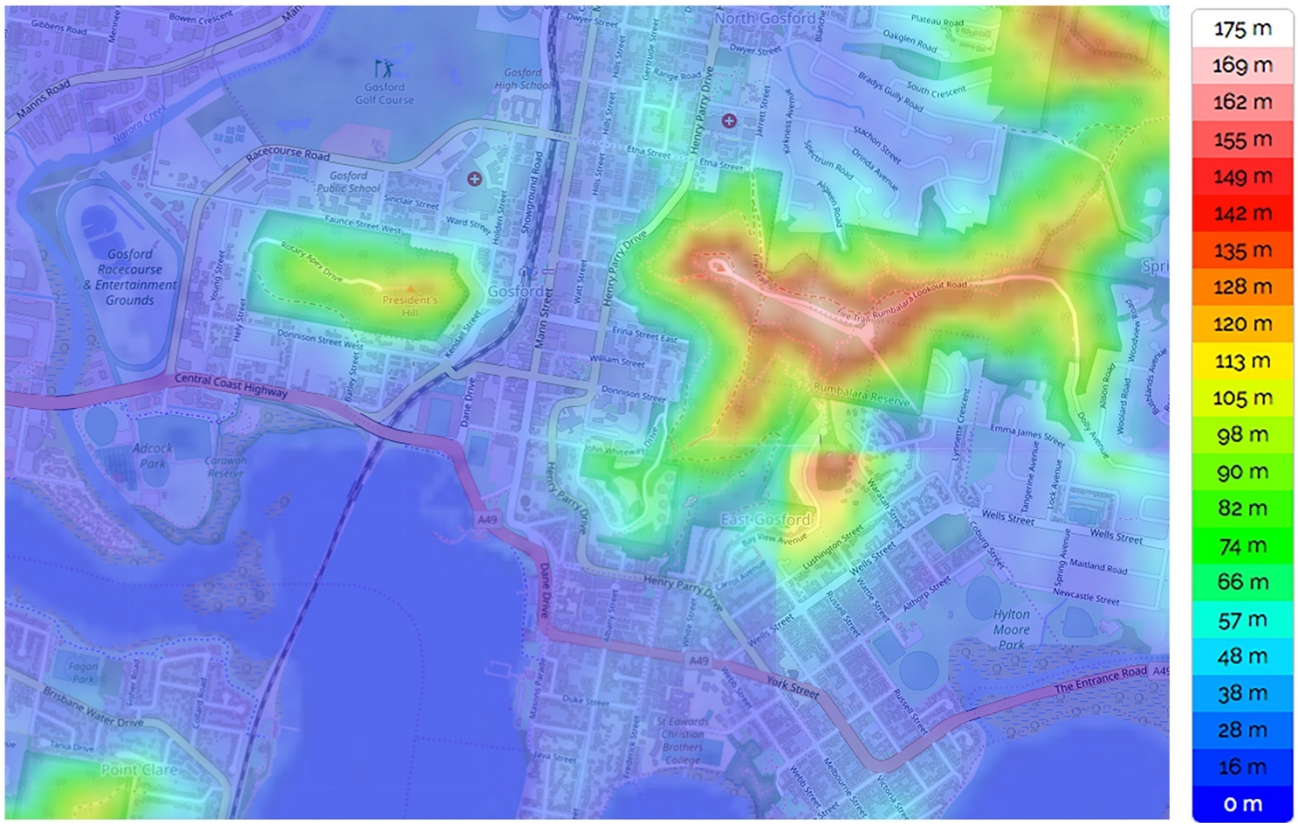


Figure 8: Gosford CBD topographical map

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, nearby buildings and public spaces within the same street. 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 “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 a number of streets in the local area. 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. Large or distinctive developments on prominent sites can contribute to the overall ‘image’ of the town. Alternatively, 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 future developments in Gosford, and, in particular those that are seeking to optimise the new development envelope opportunities. There are a number of schemes currently being proposed, highlighted in outline within figure 9. These are all to the west of the CBD’s main north / south axis and have a significant visual impact on the buildings behind, both current and proposed. Their heights, in most instances, obscure the ridgeline of Rumbalara reserve and also the subject site.

Figure 9: Future proposed developments to the west of Gosford CBD.

2.1 The Visual Context:

Within the street context, development is predominantly commercial and retail around all sides of the site. These buildings are a mixture of 2 storey shops, with offices above, larger scale supermarkets and car parks, both at grade and multi-storey, including the one presently on the subject site.
Within the neighbourhood context, development is a mixture commercial, retail, medium density residential and parks of a residential scale.
Within the urban context, there is a diverse fabric consisting of commercial, retail, low and medium density residential, sporting and recreational facilities and waterfront activities.
Within each of these three context scales there is the consistent element of medium-density built forms that characterise the area. Within a 1km radius, the density of development changes to low density, individual residences and small apartment developments, interspersed with commercial properties at a local scale. As mentioned within the 'town / city context' description above, the proposed future developments have the potential to change this neighbourhood context significantly, with a number of buildings exceeding the height of the subject proposal's towers.

2.2 Visual Features and Local Landmarks

Particular elements in the settlement pattern through either their location and/or built form provide visual nodes and landmarks that assist to differentiate 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:
Gosford waterfront.
Main approach road (Central Coast Highway) from the Motorway.
Gosford railway station
Historic and heritage buildings in the CBD
Rumbalara reserve from above.

2.3 Streetscapes

Within the local and surrounding areas, the streetscapes are typical of a large town / city, that being focused on public amenity and also commercial employment.
Where visible, open spaces provide some visual interest that assists to differentiate areas, such as provided by Kibble Park, to the West of the subject site.
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 commercial and residential areas to the west of the site and also to the areas along the waterfront and approach roads, surrounding Gosford CBD.

A large number of site photos were taken and a smaller number of local views selected from these, relevant for public viewing locations, as described above. These are a mixture of dynamic and static viewpoints, namely, fixed locations and locations where viewing from a vehicle is more likely – dynamic. These are attached in Appendix B.
The selected photos are intended to allow consideration of the visual and urban impact of the new development at both a local and regional level. They incorporate public viewing locations with more distant, elevated, or panoramic views, where the subject site falls within, and impacts on the midground and background views.

2.5 Period of View:

The view is either
(a) Intermittent, or Dynamic if it will be viewed from a car travelling along a road; or
(b) Stationary, or Static if the proposal can be viewed from a fixed location or for an extended period of time.

2.6 Context of View:

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

2.7 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 local scale visual impact, whereas if a development proposal is located in an area of the 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, with reference to Gosford DCP.

3.2 Visual Impact Assessments from 12 local viewpoint locations:

3.2.1 Method of Assessment:

In order to allow a quantitative assessment of the visual impact, photos were selected that represented relevant public viewing locations from the surrounding area. Typically, these were from surrounding roads and key residential locations to the east of the site.
A Canon EOS Full Frame Digital Camera with fixed focal length 35mm 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 3.2.2 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. These have been separated in the analysis as a ratio and are visually explained in figures 9 and 10, below. The transparent overlays of the built form are also contained, for each view, within Appendix A.

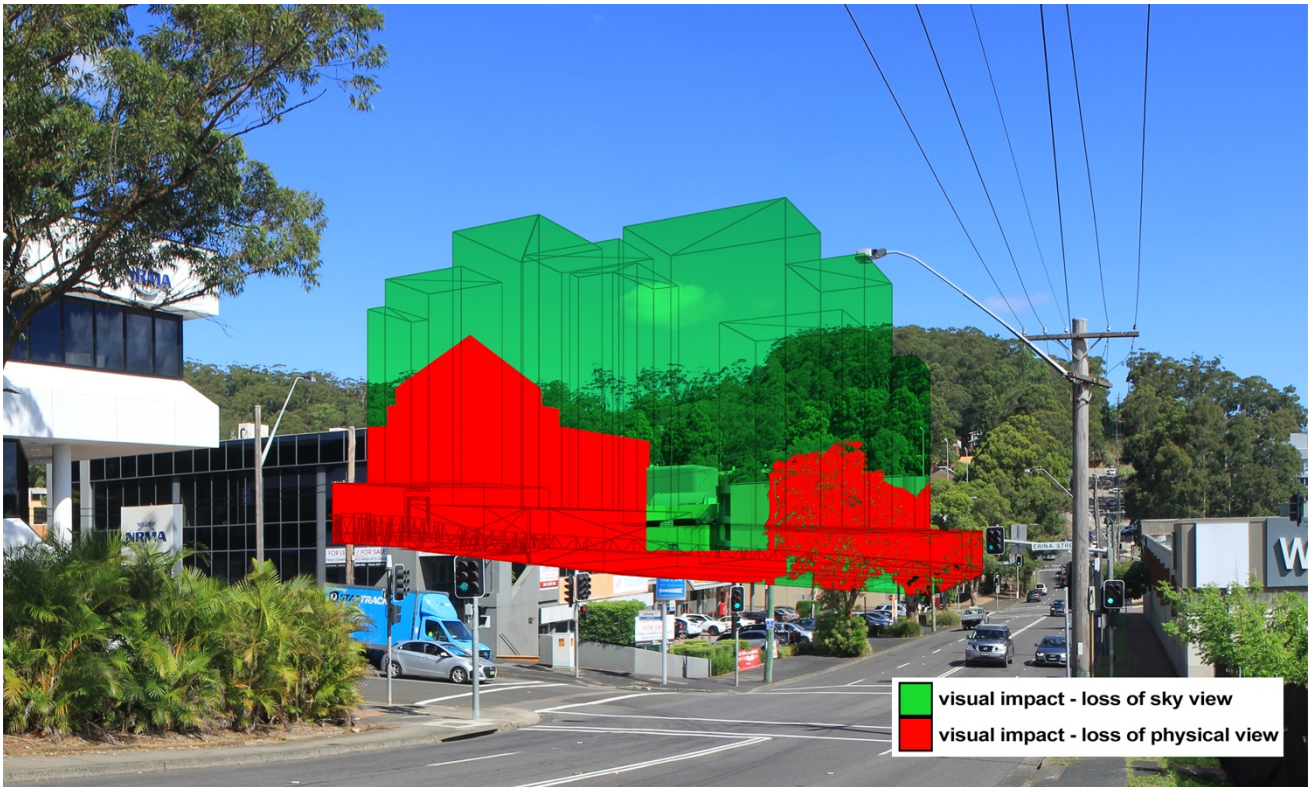


Figure 9: assessment of visual impact ratios.

Figure 10: assessment of visual impact ratios - sky and physical content view loss.

In this example, Figure 8, the ratio of visual impact to the parts of the buildings that are concealed by existing elements is 71% : 29%.
In Figure 9, the ratio of physical content view loss to sky view loss is assessed as 48% : 52%. This can then be used to interpret a qualitative assessment of the visual impact, rather than assuming the value of view loss is purely based on a figurative amount.
The quality of physical view loss can also be included, when assessing the overall impact. Distant views to the ocean, waterfront, or mountains, for instance, will have a greater value than middle distance views.

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 6 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.

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 – 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.

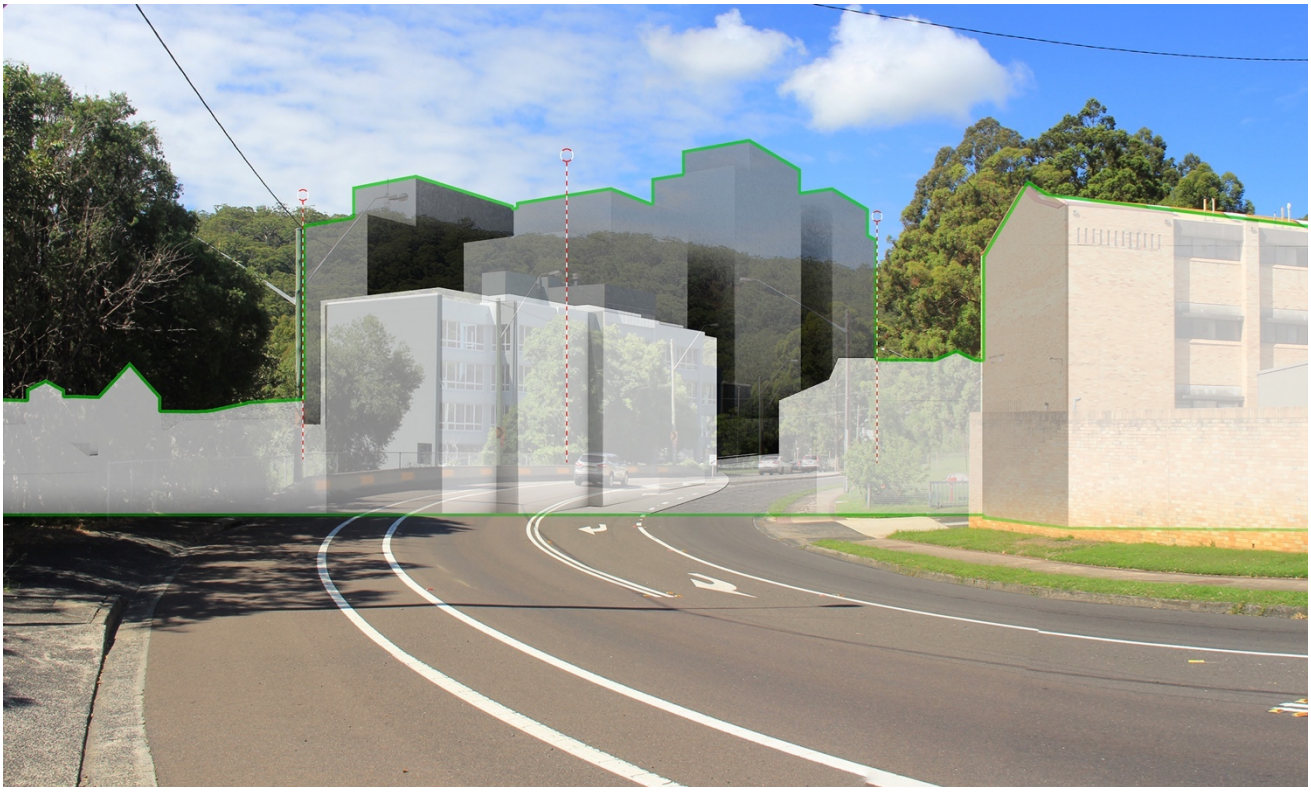
Within the Gosford DCP, there are listed several methods of assessment of visual impact and we believe that the separation of view loss and sky view loss, together with these other qualitative and quantitative methods are all important factors in this determination.

| *Scale* | *Value* | *Visual quality* | *Visual impact* |
|---|---|---|---|
| 0 | **Negligible** | N/A | No negative impact on the pre-existing visual quality of the view. |
| 1<br>2<br>3<br>4<br>5 | **Low** | Predominant presence of low quality manmade features. Minimal views of natural formations (e.g. cliffs, mountains, coastlines, waterways, ridges etc). Uniformity of land form. | A minor negative impact on the pre-existing visual quality of the view.<br>Examples:<br>– Minor impacts on natural landscapes.<br>– No impact on iconic views<br>– Impacts on a small number of receivers.<br>– Significant distance between the development and receiver. |
| 6<br>7<br>8<br>9<br>10 | **Medium** | Presence of some natural features mixed with manmade features. Some views of distinct natural formations (e.g. cliffs, mountains, coastlines, waterways, ridges etc). | A medium negative impact on the pre-existing visual quality of the view:<br>Examples:<br>– Moderate impacts on iconic views or natural landscapes.<br>– Impacts on a moderate number of receivers.<br>– Located nearby the receiver. |
| 11<br>12<br>13<br>14<br>15 | **High** | 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 or landmark features. | A high negative impact on the pre-existing visual quality of a view:<br>Examples:<br>– Loss of iconic views.<br>– Impacts on a significant number of receivers.<br>– Overshadowing effect.<br>– Directly adjacent the receiver. |

Figure 9 – Urbaine Architectural Visual Assessment Scale.

3.1.2 Assessment at selected viewpoints

**Viewpoint no.7: Existing**
Location: Henry Parry Drive, 92m south/west of junction with Donnison St. Looking north-east to subject site
RL: +19.56m Distance to site boundary: 98m. Distance to proposed buildings: 101m

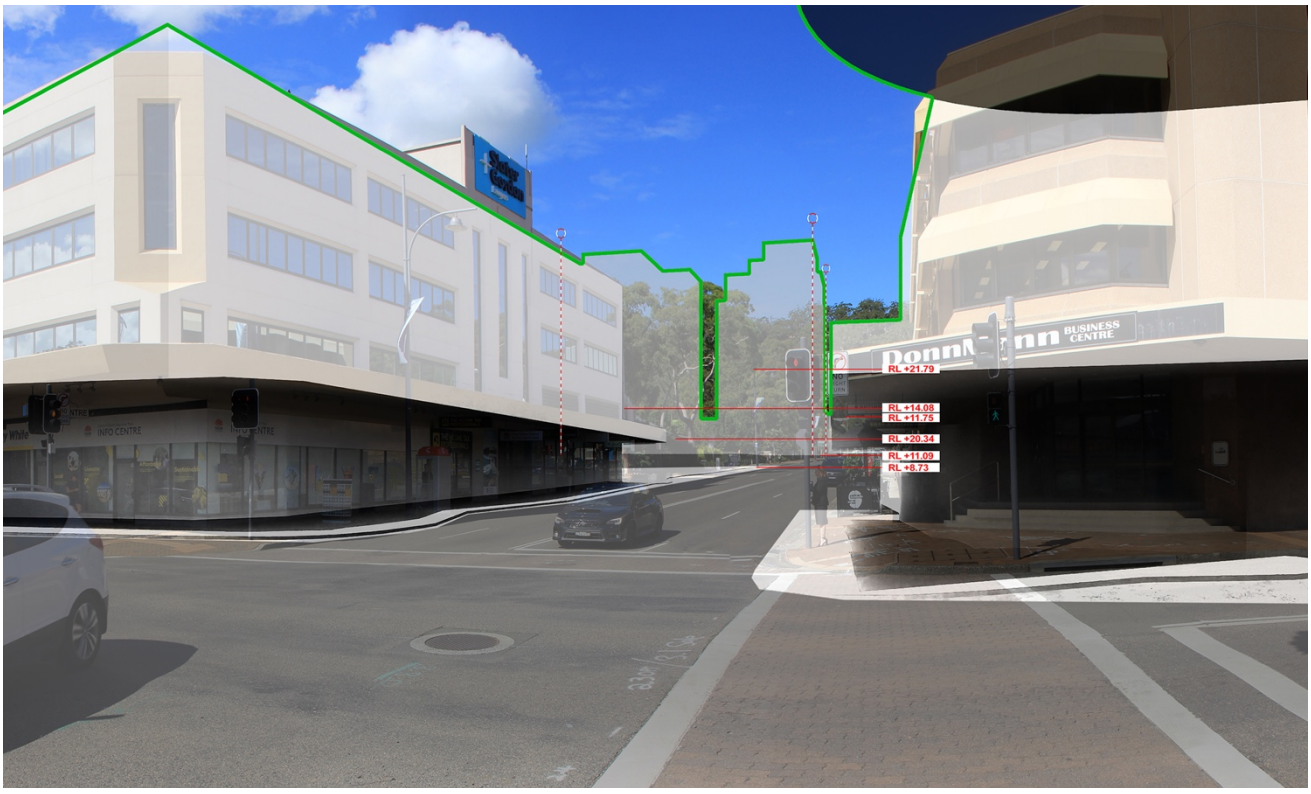


**Viewpoint no.7: Overlay of 3D CAD model onto existing site photo.**

**Viewpoint no.7: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 52%
Visual impact ratio of view loss to sky view loss in visible portion. 70%: 30%
Existing Visual Assessment Scale no.7  Visual Impact Assessment Scale no.8

This is a dynamic viewpoint. Henry Parry Drive is a main vehicular thoroughfare to Gosford CBD, bypassing the centre of the town and also Dane Drive. The visual impact from this point is one of the more significant examples in the selected viewpoints. Behind the new development, the ridgeline of Rumbalara Reserve rises to the north and Mount Mouat. This assists in mitigating the impact of the profile, although from such proximity, the upper levels of the building breach the ridgeline for most to of the extent of the upper level.
As the viewpoint moves south, so the road swings east and much of the building would then be obscured behind the lower reaches of Rumbalara Reserve and also John Whiteway Drive Bush Reserve.
This view presents a mixture of west and east facing facades, which will be in shade for much of the day, reducing the glare impact from the new built forms.
The architectural quality of built form in this area is low and of mixed usage. Mature trees line the roads and will help diminish the new development's impact as the viewer moves north.
From this viewpoint, the ground condition is not visible and its integration into the surroundings does not apply.


**Viewpoint no.8: Existing**
Location: South western corner of road junction – Donnison St and Mann St. 1.6m from eastern pavement edge, Looking east to subject site.
RL: +6.03m Distance to site boundary: 231m. Distance to proposed buildings: 234m

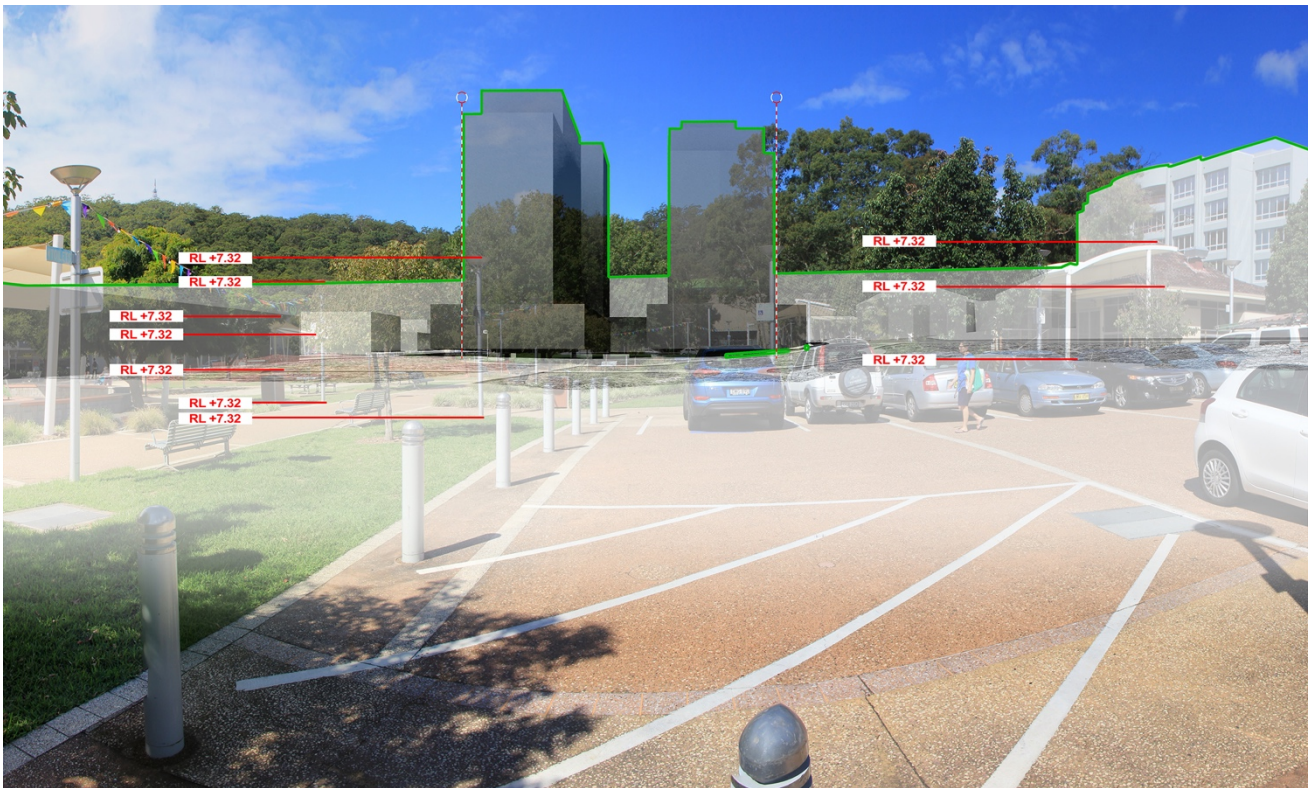



**Viewpoint no.8: Overlay of 3D CAD model onto existing site photo.**


**Viewpoint no.8: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 39%
Visual impact ratio of view loss to sky view loss. 48%: 52%
Existing Visual Assessment Scale no.2  Visual Impact Assessment Scale no.4

This is both a static and dynamic viewpoint. Pedestrians will observe the new development as they walk along Mann Street and look east up Donnison Street towards Kibble Park and the subject site beyond. The buildings along Mann Street are predominantly of 2 and 3 storey construction, with retail at ground level and offices above. When in close proximity to these buildings, their impact on the backdrop of Rumbalara Reserve and Mount Mouat is greater than that of the new development. The obscuring of sky by the existing buildings is also far greater when compared to the new development, at this distance.
Kibble Park has a number of mature trees, which serve to break up the vertical lines of the new building proposal. These will continue to mature and spread over time, further mitigating the development's visual impact.
Where the new building is visible, no distant views are impacted, since the natural backdrop to the site is Rumblara Reserve.
A small amount of the building is visible at ground level, through the Kibble Park landscape. The proposed landscape for the ground floor retail and amenities will assist in blending the new proposal into the existing landscape.
The facades of the building that are observed from this viewpoint are predominantly east facing and will receive afternoon and evening sun, as will the existing buildings along Mann Street.

**Viewpoint no.14: Existing**
Location: Kibble park – 1.8m south of bollards at northern boundary of library car park – north-west corner. Looking east to subject site
RL: +7.81m Distance to site boundary: 97m. Distance to proposed buildings: 99m

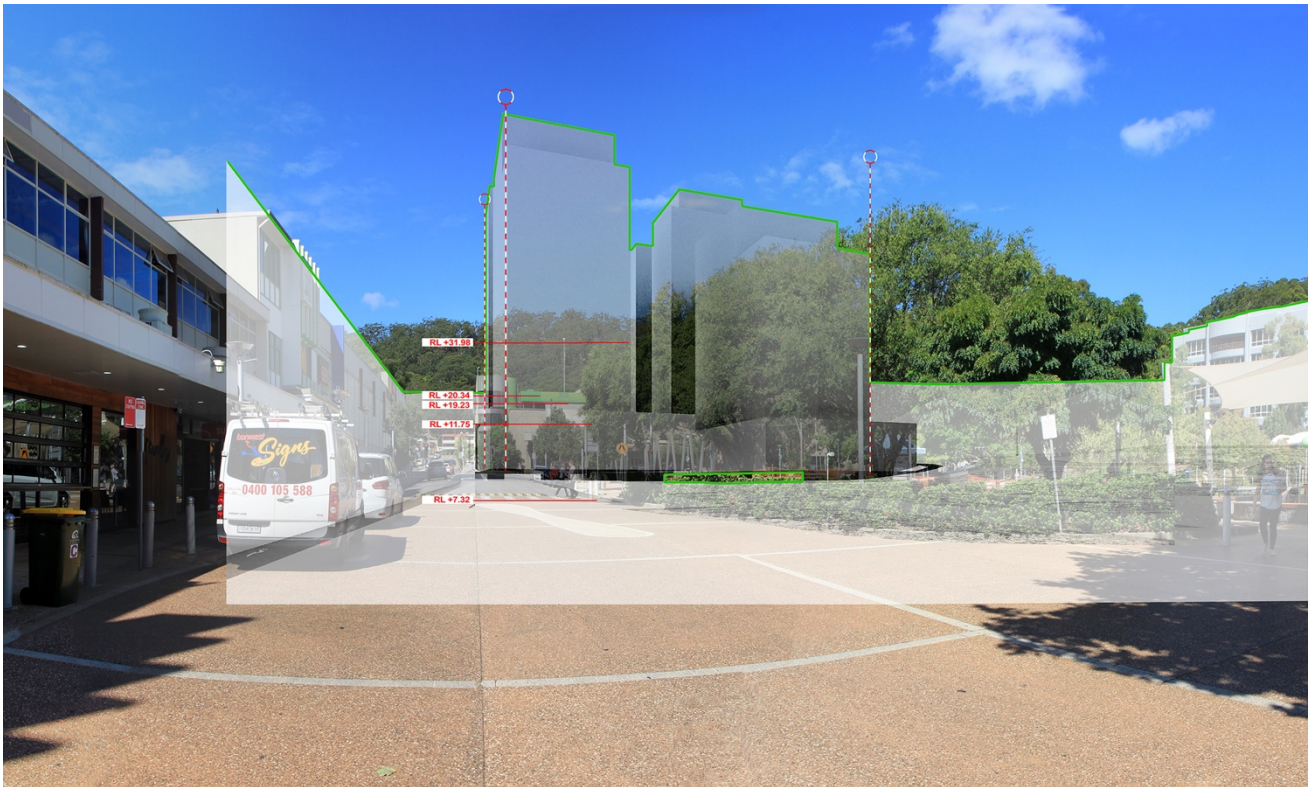



**Viewpoint no.14: Overlay of 3D CAD model onto existing site photo.**

**Viewpoint no.14: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 52%
Visual impact ratio of view loss to sky view loss. 35%: 65%
Existing Visual Assessment Scale no.8  Visual Impact Assessment Scale no.4

This is both a static and dynamic viewpoint, being both a car park and a pedestrian thoroughfare. When viewed from this proximity, there is a clear definition of the visual impact. The lower levels are largely obscured with the existing mature trees in the park, while the upper levels of the proposed build form rise above the treeline, obscuring a small amount of the Rumbalara reserve backdrop, ridgeline and some existing buildings on Albany Street North, but mostly sky. There are no middle or distant views impacted in these close locations.
All of the upper floors are visible above the ridgeline behind.
Where visible at the ground level, through the park, the proposed landscape will assist in blending the building into the park.
The building façades facing this viewpoint are almost entirely west facing and will be in sunlight through the afternoon and evening. Reduced reflectivity and lighter colours will assist in mitigating the visual impact in these conditions, as will a ‘feathered’ treatment to the uppermost levels of the towers.


**Viewpoint no.16: Existing**
Location: Opposite Kibble Park on William Street beneath canopy entry to Woolworths shopping mall. Looking ESE towards subject site.
RL: +8.42m Distance to site boundary: 123m. Distance to proposed buildings: 125m




**Viewpoint no.16: Overlay of 3D CAD model onto existing site photo.**


**Viewpoint no.16: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 58%
Visual impact ratio of view loss to sky view loss. 42%: 58%
Existing Visual Assessment Scale no.5  Visual Impact Assessment Scale no.7

This is both a static and dynamic viewpoint, being an access road around Kibble Park and also a pedestrian thoroughfare from the park to the shopping mall to the north. When viewed from this proximity, the northern towers of the new development are largely exposed, with only a small amount of foreground landscaping in the park breaking up the built form.
The existing architecture surrounding Kibble Park is of no great merit, being the shopping mall to the north and a 4 storey office building to the south.
All of the upper floors of the northern towers are visible above the ridgeline behind. The southern towers are largely obscured by the large trees in Kibble Park.
Where visible at the ground level, through the park, the proposed landscape will assist in blending the building into the park.
The building façades facing this viewpoint are predominantly west facing, with a section of northern facing facades also visible. These will be in direct sunlight for most of the day. The use of reduced reflectivity materials and muted pale colours will assist in mitigating the glare.
Ground level landscaping will blend the lower levels of the proposal into the existing surroundings and Kibble Park.
The visual impact is mostly of sky view, with approximately one third being divided between Rumbalara Reserve and the existing buildings on Albany Street North.

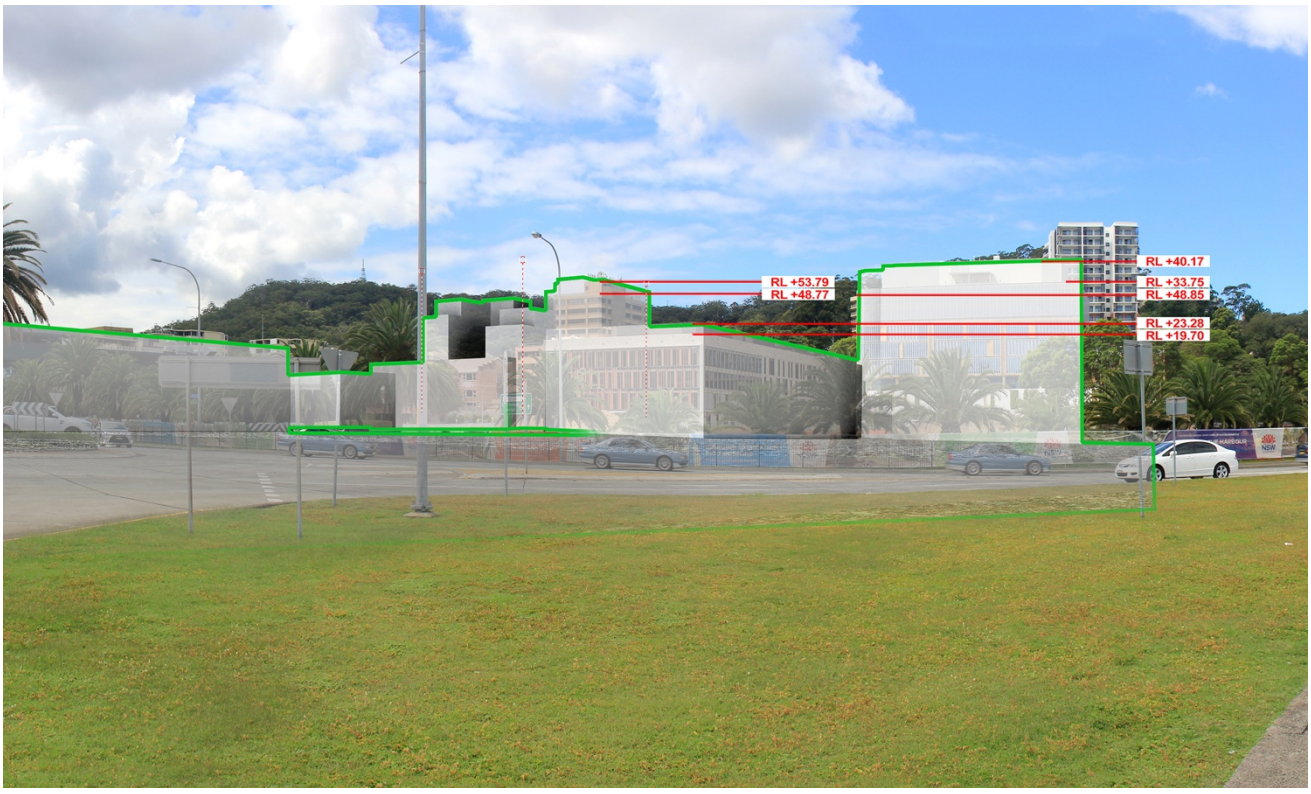
**Viewpoint no.22: Existing**
Location: 24m north of road junction between Erina St East and Henry Parry Drive – on inner edge of western pavement. Looking SSE to site.
RL: +17.21m Distance to site boundary: 140m. Distance to proposed buildings: 143m


**Viewpoint no.22: Overlay of 3D CAD model onto existing site photo.**


**Viewpoint no.22: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 71%
Visual impact ratio of view loss to sky view loss. 48%: 52%
Existing Visual Assessment Scale no.5  Visual Impact Assessment Scale no.6

This is a dynamic viewpoint. Henry Parry Drive is a main vehicular thoroughfare to Gosford CBD, bypassing the centre of the town and also Dane Drive. The visual impact from this point is one of the more significant examples in the selected viewpoints, similar to that from viewpoint 7, but from the north. Behind the new development, the ridgeline is of the southern edges of Rumbalara Reserve, which becomes John Whiteway Drive Bush Reserve, visible behind the subject site to the west. The building breaches the ridgeline for most of the extent of the upper levels.
As the viewpoint moves north, existing buildings diminish, replaced by the lower reaches of Rumbalara Reserve and the many mature trees on the eastern side of Henry Parry Drive. These serve to obscure much of the proposed development, diminishing the visual impact significantly.
This view presents predominantly northern facades with a smaller amount that are western facing, which will receive direct sunlight for the majority of the day.
From this viewpoint, the ground condition is visible in parts and its integration into the ground plane will be facilitated through the implementation of appropriate landscaping.

**Viewpoint no.30: Existing**
Location: 14m west of edge of road at southern exit of road junction between Central Coast Highway and Dane Drive. Looking ESE towards subject site.
RL: +3.27m Distance to site boundary: 668m. Distance to proposed buildings: 671m




**Viewpoint no.30: Overlay of 3D CAD model onto existing site photo.**

**Viewpoint no.30: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 38 %
Visual impact ratio of view loss to sky view loss. 92%: 8%
Existing Visual Assessment Scale no.6  Visual Impact Assessment Scale no.4

This is a static viewpoint, being the main walkway around the waterfront area of Gosford.
The current view is dominated by two new developments fronting Mann Street and Georgiana Terrace. While these are only of a mid-rise height, their bulk and scale form a strong visual boundary to the southern end of the Gosford CBD. Proportionately, the visual impact of each building separately exceeds that of the entirety of the new towers on the subject site to the north west. Additionally, large plant rooms atop these foreground buildings create a significant pre-existing visual impact of built forms from this crucial location.
At this distance, the new development integrates well into the urban fabric of Gosford CBD. The observed height of a number of commercial buildings on Mann Street are at a similar visual level to those of the new towers behind. The Rumbalara escarpment and Mount Mouat form a backdrop to the new development and only a small portion of the southern towers breaks the ridgeline.
New residential development to the south of the subject site, to the east of Henry Parry Drive have far greater visual impact from this location and from the entire waterfront, as the observer moves south.
This view presents a mix of western and southern facing facades, which will receive partial sunlight in the afternoons. The use of appropriate materials, colours and shading devices will diminish any glare impact to this location.

**Viewpoint no.37: Existing**
Location: 2m from northern edge of Gosford wharf – at wharf 'elbow', most southerly position of wharf. 11, west of restaurant building. Looking NNE towards subject site.
RL: +2.44m Distance to site boundary: 809m. Distance to proposed buildings: 812m


**Viewpoint no.37: Overlay of 3D CAD model onto existing site photo.**


**Viewpoint no.37: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 28%
Visual impact ratio of view loss to sky view loss. 100%: 0%
Existing Visual Assessment Scale no.11  Visual Impact Assessment Scale no.4

This is a static viewpoint, being the main access deck for Gosford wharf and the associated moorings.
The current view is predominantly of the water and moored vessels in the immediate vicinity, with Rumbalara Reserve Escarpment and John Whiteway Drive Bush Reserve providing a largely naturally landscaped backdrop to the Gosford CBD. Two buildings dominate the view. The six storey development at the southern end of Mann Street, adjoining Gosford City Park and the newly-constructed Merinda Apartment building on Henry Parry Drive, which breaks the ridgeline of the lower reaches of Kumbalara Reserve. The relative impact of the new proposal to the rear of both of these is therefore minimised considerable, further ameliorated by the upper levels of the towers remaining fully below the ridgeline, when viewed from this location.
The facades facing this view are predominantly south facing, creating minimal impact from glare or reflectivity throughout the day.
Apart from the two dominant buildings, already described, this view is of a high visual quality, with mature landscape bordering the CBD and obscuring much of the CBD.

**Viewpoint no.40: Existing**
Location: Flyover of Central Coast Highway above railway – 157m west of roundabout junction between Central Coast Highway and Dane Drive. Looking east to subject site.
RL: +11.50m Distance to site boundary: 769m. Distance to proposed buildings: 772m


**Viewpoint no.40: Overlay of 3D CAD model onto existing site photo.**

**Viewpoint no.40: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 58%
Visual impact ratio of view loss to sky view loss. 100% : 0%
Existing Visual Assessment Scale no.5  Visual Impact Assessment Scale no.6

This is a dynamic viewpoint, being the main access road to Gosford from the west – The Central Coast Highway. The apex of the flyover represents the most elevated viewing location in the immediate vicinity of the CBD to the west.
The current view is predominantly of the Central Coast stadium and its surrounding landscape border of relatively mature palm trees. There are also 4 large floodlighting structures that dominate the immediate skyline.
The new proposal on the subject site blends well into the existing urban fabric. Although it is more elevated and the towers are taller than those in the centre of the CBD, the distance from the observer results in the tops of the towers aligning with the taller structures already on Mann Street.
As in other viewpoints examples, the six storey building at 32, Mann Street and the new Merinda Apartment building on Henry Parry Drive both dominate the view, in terms of imposed built forms.
From this location, Merinda Apartments is the only building to break the ridgeline at the southern reaches of Kumbalara Reserve. The new development sites well below the ridegeline and is of a respectful scale and massing relative to other elements of the CBD.
The facades face west towards the viewer and appropriate use of materials, colour and shading devices will ensure the minimisation of any glare impact on approaching vehicles.
Since this is a key entry point to Gosford, a minimal impact is of great importance from this location.


**Viewpoint no.44: Existing**
Location: Donnison Street – opposite junction with Dane Drive on pavement edge. Looking ESE towards subject site
RL: +5.89m Distance to site boundary: 486m. Distance to proposed buildings: 489m


**Viewpoint no.44: Overlay of 3D CAD model onto existing site photo.**


**Viewpoint no.44: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 82%
Visual impact ratio of view loss to sky view loss. 100%: 0%
Existing Visual Assessment Scale no.3  Visual Impact Assessment Scale no.5

This is a dynamic viewpoint, being the branch road off the Central Coast Highway, directly into the centre of the Gosford CBD. The existing view is mostly of retail and commercial buildings at this location, of low architectural quality. The ridgeling of Kumbalara reserve is observed in the distance at the eastern end of Donnison Street, with the subject site just visible beyond the glimpses of Kibble Park, behind the 3 storey commercial building on the corner of the junction of Mann Street and Donnison Street.
This is a major vehicular trafficked route, in approaching the city and the visual impact on approach is important for the integrity of the CBD's overall sense of scale and cohesion, in terms of its built form.
The new proposal on the subject site blends well into the existing urban fabric, rising to a similar observed height as the apartments on. Although it is more elevated and the towers are taller than those in the centre of the CBD, the distance from the observer results in the tops of the towers aligning with the taller structures already on Mann Street, particularly the multi-storey residential towers at 80 Mann street.
The 5 storey NSW Government commercial building to the north east of the viewpoint, on the corner of Donnison St and Baker St has the greatest visual impact, effectively breaking the silhouette of the Rumbalara Reserve ridgeline across the entirety of its parapet length. In comparison and, as a result of the distance, the proposed towers on the subject site remain below the ridgeline from this viewpoint.
The facades face west towards the viewer and appropriate use of materials, colour and shading devices will ensure the minimisation of any glare impact on approaching vehicles.
Since this is a key entry point to Gosford, a minimal impact is of great importance from this location.

**Viewpoint no.47: Existing**
Location: Covered pedestrian footpath to west of railway line, opposite southern end of railway station buildings and adjoining Showground Road. Looking SSE towards subject site.
RL: +20.02m Distance to site boundary: 431m. Distance to proposed buildings: 434m


**Viewpoint no.47: Overlay of 3D CAD model onto existing site photo.**

**Viewpoint no.47: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 64%
Visual impact ratio of view loss to sky view loss. 72%: 28%
Existing Visual Assessment Scale no.3  Visual Impact Assessment Scale no.5

This is a static viewpoint, being a covered pedestrian access footpath to the railway station from the west.
The view is dominated by the railway line and associated buildings, which are of minimal architectural merit, being very utilitarian in their design.
This is obviously a well trafficked path by commuters and the impact on the distant view is of importance. The current view has a terminating backdrop of the southern end of Rumbalara Reserve, with a recently constructed apartment building, Bonython Tower, at 159, Mann Street, breaking the ridgeline across the entirety of its upper levels. The new proposal on the subject site is of a similar observed height and visual mass, because of its distance from the observer. In the midground are located buildings at the northern end The new proposal also impacts on the ridgeline, although not across the full extent of its upper levels. Although it is more elevated and the towers are taller than those in the centre of the CBD, the distance from the observer results in the tops of the towers aligning with the taller structures already on Mann Street, particularly the multi-storey residential tower at 80 Mann street.
location.

**Viewpoint no.51: Existing**
Location: Bus stop parking bay on Central Coast Highway, 17om west of major junction with Brisbane Water Drive. Looking east towards subject site.
RL: +19.6m Distance to site boundary: 2.646km. Distance to proposed buildings: 2.648km


**Viewpoint no.51: Overlay of 3D CAD model onto existing site photo.**


**Viewpoint no.51: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 44%
Visual impact ratio of view loss to sky view loss. 100%: 0%
Existing Visual Assessment Scale no.3  Visual Impact Assessment Scale no.2

This is a dynamic viewpoint on the main access road to Gosford, connecting to The Pacific Motorway. This location is at the start of the ascent of the Central Coast Highway towards Kariong. The view is dominated by the 6 lane Highway and major junction with Brisbane Water Drive, in the foreground. The middle-distance views are of semi-industrial and large retail buildings, bordering the highway. In the far distance, the taller buildings at the southern end of Gosford CBD are visible, with the southern reaches of Rumbalara Reserved forming the backdrop.
This is a well trafficked road, in both directions and the visual impact of any new development, whilst visible from this location, is diminished by the plethora of visual distractions in the near and middle-distance vicinities.
The towers of the proposed development can be seen above the rise in topography, created by Presidents Hill, to the west of Gosford.
Approximately half of the tower forms are visible and these are contained within the overall backdrop envelope of Rumbalara Reserve, diminishing the visual impact considerably.
Northern and western facades face this viewpoint, but at this distance, any likelihood of glare creation can be considered insignificant.

**Viewpoint no.53: Existing**
Location: Kariong Hill Lookout parking area circuit road of Central Coast Highway. Looking ENE towards subject site.
RL: +98.8m Distance to site boundary: 3.491km. Distance to proposed buildings: 3.493km.

**Viewpoint no.53: Overlay of 3D CAD model onto existing site photo.**

**Viewpoint no.53: Extent of visual impact of proposed development and view loss analysis.**
Visual impact – portion of building visible in view – 92%
Visual impact ratio of view loss to sky view loss. 100%: 0%
Existing Visual Assessment Scale no.11  Visual Impact Assessment Scale no.7

This is a static viewpoint, being a viewing lookout diversion off the main thoroughfare of The Central Coast Highway. The Highway is bordered, for the most part by mature trees as it ascends towards Kariong, so the subject site is rarely visible from this heavily trafficked road.
From the lookout, the subject site is visible and the angle of view is at approximately 45 degrees to the south west corner of the site, resulting in an almost equal proportion of western and southern facades being shown.
Since the viewpoint is elevated, the tops of the towers on the subject site sit well below the ridgeline behind and further mitigiation of the visual impact could be achieved with the appropriate use of colours, materials and landscaping.
There is a logical sequence of stepping to the built forms, when observed from this location, progressing up the hill towards Rumbalara Reserve. In this respect, the larger forms on the subject site read well within the overall urban fabric and also within the intended growth of Gosford under the planning guidelines for ‘Gosford Al

Summary assessment:

This collection of A4 images summarises the assessment of visual impact on each of the views in turn, This is intended to be used in the assessment of the proposal, which, in most cases, creates an acceptable level of visual impact, when seen in the context of the site, its surroundings and the overall future development of ‘Gosford Alive’ in the area of the Gosford CBD.
The ridgeline to the east of the site is only broken by the built form when observed at a close distance and it is from these locations that large parts of the building are screened by existing trees and structures
The report is accompanied by a set of 12 x A3 images – see APPENDIX A - one for each viewpoint location, including the various stages of overlay, as outlined above.

Figures 11 and 12 demonstrate the difference between the block form transparency, used for the visual impact assessments and a visualised representation of the architectural form in the same context. The amounts of shade formed both in the built form and also in the spaces between the towers assist greatly in articulating the various elements of the built form, which is not as apparent in the overall view loss colouring. In particular, the relationship of solid to void and the variance of this in the design, assist greatly in creating a sense of randomness throughout the facades.

Figure 11: assessment of visual impact at viewpoint 22, using semi-transparent block colour.

Figure 12: Visualisation of the design within its context at viewpoint 22.

## 4. CONCLUSIONS + PLANNING SCHEME PROVISIONS RELATING TO VISUAL IMPACTS

The provisions of the Gosford City Centre SEPP (2018) are clear in their intents with respect to a number of specific outcomes:

- developed character is an important aspect which contributes to the city the must therefore be conserved and enhanced;
- development has to be compatible with the primary functions of the zone and will not have an unacceptable impact on the community, locality or catchment;
- the natural environment and ecological values are to be preserved and maintained; and
- the scenic values of the local area and views from the local area will not be detrimentally affected.

These intended outcomes indicate local character, legibility and preservation of views to the natural environment are considered to be key factors for future development.
Although development within Gosford CBD, in particular, is varied and mixed, the existence of key heritage buildings and local community amenity areas, requires a sensitive approach to any development, particularly at the ground level,
The scale, built form and planning of the proposed development provide a respectful response to the site and surroundings, whilst remaining within the designated volumetric and height limit controls defined in Gosford City Centre SEPP (2018) and 'Gosford Alive' planning guidelines. In particular, the overall massing of the towers reflects the need to minimise the development's overall visual impact on Kibble Park and other public amenity areas within close proximity to the site. The effect of lowering the tower heights to the west results in a far less imposing silhouette against the sky and escarpment to the east.
Views from the local area are mixed – some limited to the immediate area, adjacent roads and streetscapes and others with middle and far distant views to the west, including to hills behind The Central Coast Highway, beyond the City. There is limited connectivity within the local area in terms of views available. From the roads and streetscapes it is clear that the proposed development, because of its location, adjoining Rumbalara Reserve and the escarpment, will not have a significant impact on significant distant views from within the local area. The scenic values of the locality are comprised of water views to the west and medium density residential and commercial development views to the north, east and south, with some distant views to the west.
The proposed development, in terms of visual impact, is consistent with the aims and objectives of the Gosford City Centre SEPP (2018) and 'Gosford Alive' guidelines, in that it is a suitable development for the area. It also assists in enhancing the cultural fabric of the area by providing additional, high quality accommodation.
It is our opinion that the development will strengthen the community of Gosford. The quality of the proposed development is in our opinion compatible with the primary function of the zone.
Mitigation of the visual and physical impact will be achieved through the use of appropriate materials, being of natural hues and non-reflective. Also, through the use of native vegetation and landscaped retaining walls where the buildings meet the ground plane. As the landscape, within and around the new development, matures, so the building will blend increasingly into the natural surroundings.
The visual impacts of the proposed development are considered to be compatible with the existing visual context and satisfy the intents and objectives of the Gosford Local Environmental Plan.

## 5. APPENDICES

- 5.1 APPENDIX A: Full Panoramic Photomontages of the Proposed Development from local viewpoints + verification diagrams.

- 5.2 APPENDIX B: Site Photographs.

- 5.3 APPENDIX C: Methodology article – Planning Australia, by Urbaine Architecture.

# APPENDIX C:

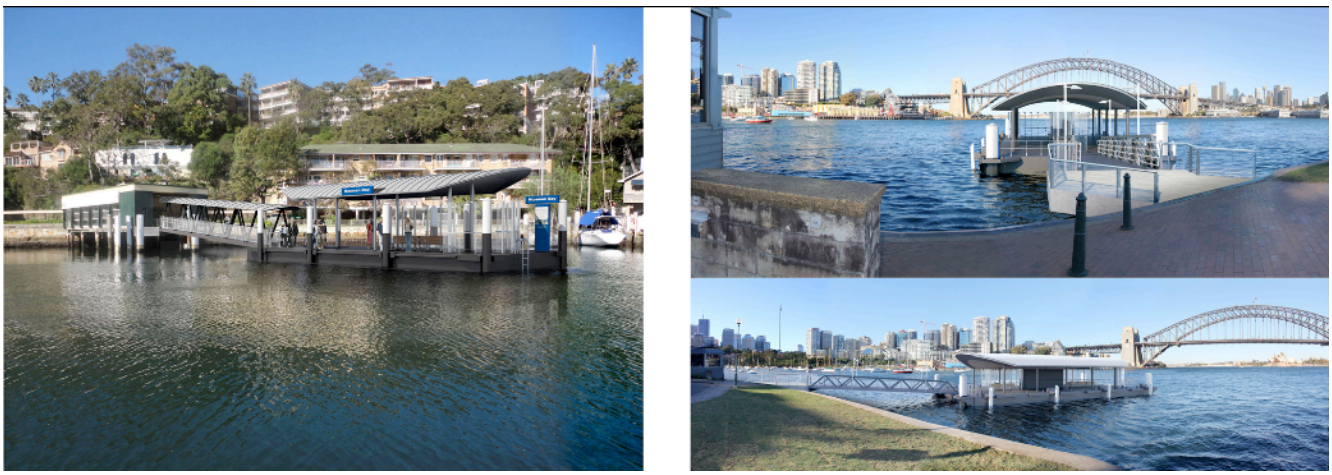
Methodology article – Planning Australia, by Urbaine Architecture.

**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%.

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?

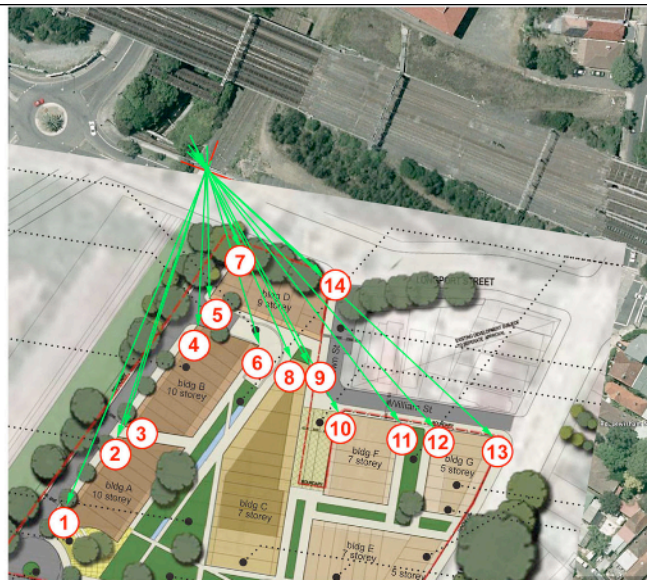
One inner west group thinks not, after inaccuracies were found in a series of digital photo montages which made the proposed Lewisham Estates development appear much smaller than it would if built.

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.

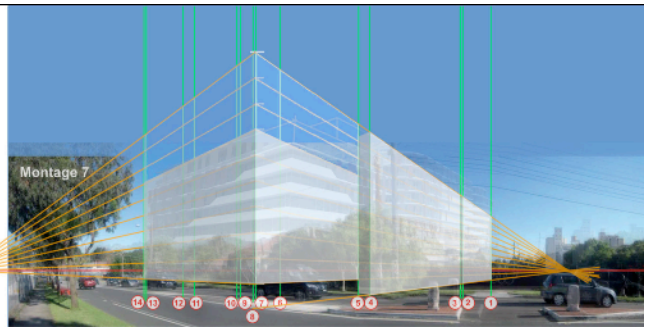
The No Lewisham Towers residents' action group claims the original images were so misleading that the corrected ones should go on public exhibition before the Planning Assessment Commission makes its determination next week.

**SMH article re inaccurate visualisations**




**Key visual location points on site: Urbaine**


**Photomontage submitted by developer**




**Assessment of inaccuracy by Urbaine**

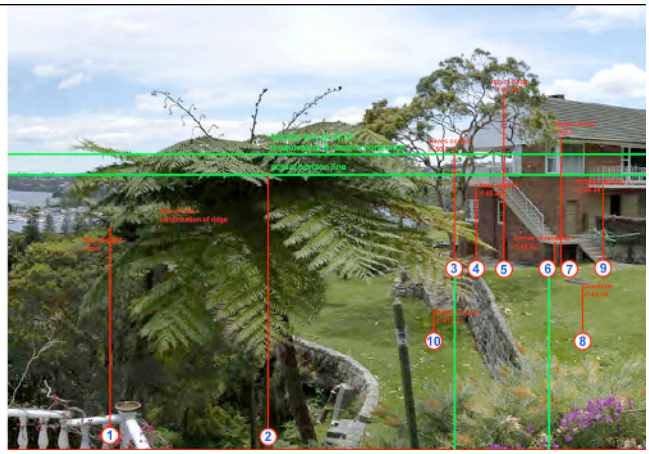
Urbaine has developed a number of methods for adding verification data to the 3d model of new proposals and hence to the final photomontages. These include the use of physical site poles, located at known positions and heights around a site, together with drones for accurate height and location verification 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.

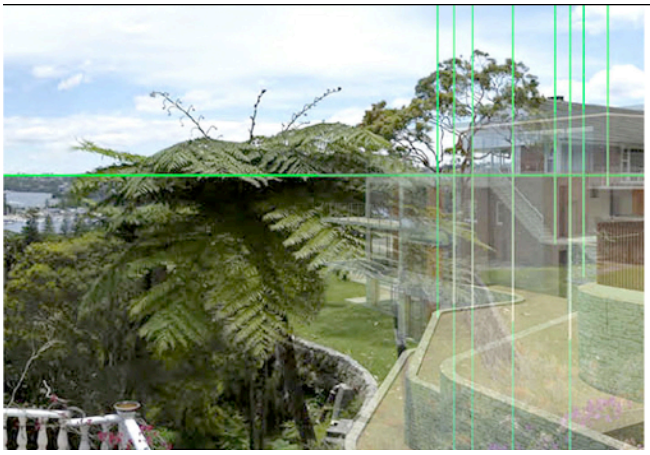
The following example clearly demonstrates this – a house montaged into a view, by others, using very few points of reference for verification. By analysing the existing photo alongside the survey, the existing site was able to be recreated with a series of reference elements built into the model. A 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

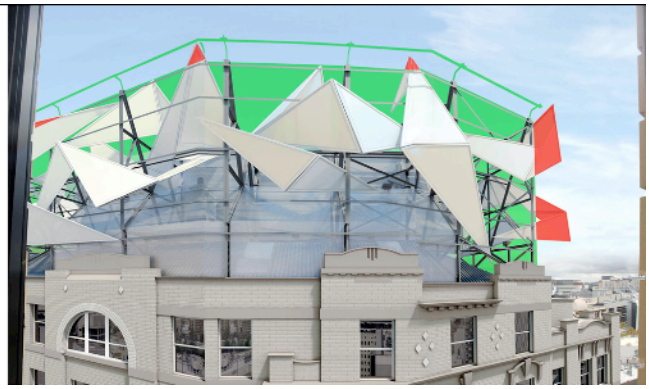
Final verified photomontage by Urbaine

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 new proposal for digital billboard

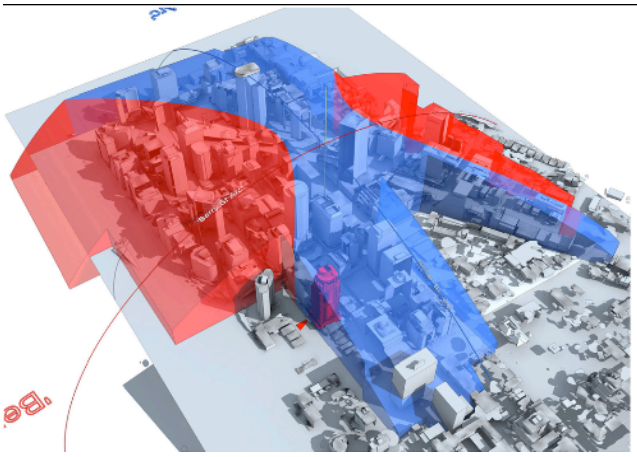
Existing situation – view from adjoining hotel

Photomontage of view from hotel

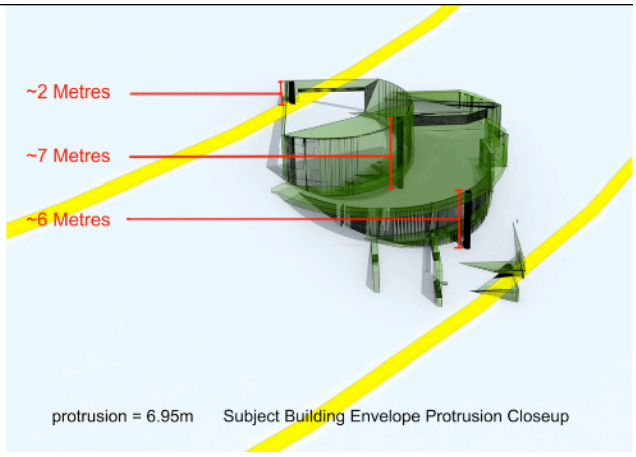


View loss – green = view gain / red = view loss

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 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.

**Verified photomontage for proposed apartments in Milsons Point by Urbaine.**