

View and Visual Impact Analysis



Building R4A State Significant Development Application

Submitted to Department of Planning and Environment
On Behalf of Lendlease (Millers Point)

August 2016 ■ 10051

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This report has been prepared by:



Brendan Hoskins

17/08/2016

This report has been reviewed by:



Michael Rowe

17/08/2016

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A	Visual Impact Photomontage Methodology Report <i>Virtual Ideas</i>
B	View Analysis Report <i>JBA</i>

1.0 Introduction

This report provides a Visual and View Impact Analysis to accompany a proposed State Significant Development Application (SSDA) for the construction and use of Residential Building R4A at Barangaroo South within the Barangaroo site.

Lendlease (Millers Point) seeks consent for the following components of work:

- Construction, use, and fit-out of a 72 storey building (RL 250) known as Building R4A, comprising:
 - 431m² retail floor space; and
 - 47,451m² residential floor space calculated in accordance with the Concept Plan (MP06_0162), as modified.
- Operation, fit-out and use of the basement car park (approval for construction sought under the Stage 1B Basement application) to accommodate 391 residential car spaces, 1 retail car space, residential and retail storage, waste rooms, facilities management offices, shared plant and services, and circulation spaces.
- Limited demolition of interim basement elements, such as access points and service risers, constructed on a temporary basis under the Stage 1B Basement application to allow for the integration of the basement elements with the proposed building.
- Interim and permanent landscaping works, including paving pedestrian immediately surrounding the building (including paving of the pedestrian plaza, referred to as the 'Strada') and a podium garden.
- A signage zone to accommodate building identification signage on Barangaroo Avenue.

Building R4A is the result of an international design competition held for the family of Buildings, R4A, R4B and R5 in 2014. World renowned architects Renzo Piano Building Workshop (RPBW) was the successful architect, and in collaboration with Lendlease Design, has developed the design of the proposed building. The three towers (Buildings, R4A, R4B and R5) have been conceived as three 'crystals', each adopting a triangular crystal volume which results in a slender and elegant form.

This report provides a Visual and View Impact Analysis in support of the proposed development as described above.

The analysis is made in comparison to those impacts previously analysed and approved as part of the Barangaroo Concept Plan (Mod 8). The Secretary Environmental Assessment Requirements (SEARs) dated 2 April 2015 for the project require that consideration be given to Visual and View Impacts (item 5 – key issues) and also that a visual impact assessment must be undertaken (item 7 – plans and documents). Specifically, the SEARs provide for the following be addressed with respect to views and visual impacts:

SEARs – 5. Visual and View Impacts

- *Identify important sight lines and visual connectivity to and through the site.*
- *A visual impact assessment is to be provided to identify the visual changes and impacts on the site and its surrounds when viewed from key vantage points (see plans and documents section).*

Requirements for Plans and Documents – 7. Visual Impact Assessment

The visual impact assessment, including focal lengths, must be done in accordance with Land and Environment Court requirements.

Visual assessment methodology

- *The consultant's methodology should be explicit. This may include a flow-chart indicating how the analysis is to be undertaken, or a narrative description of the proposed sequence of activities.*
- *As part of the methodology, the consultant should provide, and explain, criteria for assessment relevant to the site, local context and proposed built form and public domain outcomes. A rationale should be provided for the choice of criteria. Criteria must include reference to the planning framework.*
- *Visual catchment should be defined and explained (see below).*
- *An assessment matrix should be produced including number of viewers, period of view, distance of view, location of viewer to determine potential visual impact - i.e. high, medium or low.*

Visual catchment

- *Potential visual catchments and view locations, including contours (areas from which the development is visible) should be identified. This must include, but is not limited to, Hickson Road, Kent Street, Lime Street, Gas Lane, High Street, Sydney Observatory, Sydney Observatory Park, Clyne Reserve, Munn Reserve, Sydney Harbour Bridge, Pyrmont Bridge, Ballart Park Darling Island, Jones Bay Wharf Pyrmont, East Balmain, Darling Harbour, Blues Point, Millers Point, Sydney Opera House, and Cremorne Point.*
- *Categories of views (e.g. from the water, from public open space, from key streets, from main buildings and from key heritage items) should be defined.*
- *Photos are required for representative view categories, plotted on a map.*

Visual material

- *Reference to be made to site analysis.*
- *Provide key plan indicating where viewpoints are located and narrative explaining why these have been selected.*
- *The built form should be illustrated in the context of the visual catchment to enable assessment of the visual impact.*
- *The location of cross-sections should be clearly shown on a key plan and the choice of positions explained. The cross sections should be shown in the context of the visual catchment.*
- *Vertical exaggeration should provide an accurate rather than 'flattened' impression of buildings in the context of the visual catchment.*
- *A key plan must be provided for photomontages. In addition, the choice of locations should be explained. Photomontages should be provided for close as well as distant views.*
- *Assessment must benchmark against the existing situation with the proposed plans.*
- *Photomontages to be provided for key viewpoints from all directions, and from several positions within the visual catchment.*
- *As above, support visual evidence such as cross sections to be drawn to realistic scales and shown in context.*

A comparison of 'before', 'approved' and 'proposed' is fundamental to a visual impact assessment, therefore the visual impact assessment (A3 in size) should be undertaken using human eye focal lengths (50mm at 35mm FX format and 46° angle of view) from long range, medium range and short range positions so that they can be assessed with respect to visibility, visual absorption capacity and visual impact rating.

With respect to the SEARs, the Land and Environment Court of NSW has published requirements for photomontages that are proposed to be relied on as or as part of expert evidence in Class 1 appeals. In summary, the published LEC photomontage policy requires that any photomontage to be relied upon in an expert report is to be accompanied by:

- An existing photograph showing the current, unchanged view of the location depicted in the photomontage from the same viewing point as that of the photomontage (the existing photograph);
- A copy of the existing photograph with the wire frame lines depicted so as to demonstrate the data from which the photomontage has been constructed;
- A 2D plan showing the location of the camera and target point that corresponds to the same location the existing photograph was taken.”

This report analyses the visual and view impacts in relation to the SEARs. It is based upon and should be read in conjunction with the following documentation:

- Building R4A Visual Impact Report August 2015 prepared by Virtual Ideas (**Appendix A**); and
- View Analysis prepared by JBA (**Appendix B**).

This report should also be read in conjunction with the Visual and View Impact Analysis material that was prepared, publicly exhibited and assessed as part of Concept Plan Modification 4, Concept Plan Modification 6 and Concept Plan Modification 8, which all establish the benchmark for consideration of the current proposal against the existing approval in relation to visual and view impacts as is required by the SEARs.

This View and Visual Impact Analysis should also be read together with the Building R4A State Significant Development Application Environmental Impact Statement prepared by JBA dated August 2016.

2.0 The Site

2.1.1 The Concept Plan Site

Barangaroo is located on the north western edge of the Sydney Central Business District (CBD), bounded by Sydney Harbour to the west and north; the historic precinct of Millers Point for the northern half, The Rocks and the Sydney Harbour Bridge approach to the east, and a range of new developments dominated by large CBD commercial tenants, and the King Street Wharf / Cockle Bay precinct to the south.

The Barangaroo Site includes Hickson Road. Land to the west of Hickson Road within the Barangaroo site has been divided into three distinct redevelopment areas (referred to collectively herein as the Barangaroo Development Site) – the Barangaroo Point (in the north), Central Barangaroo and Barangaroo South.

The 22 hectare Barangaroo Development Site is generally rectangular in shape and has a 1.4 kilometre harbour foreshore frontage, with an eastern street frontage to Hickson Road. An aerial photo of the Barangaroo Development Site and its context is shown at **Figure 1**. The land has been the subject to multiple investigations that detail its physical and natural characteristics.

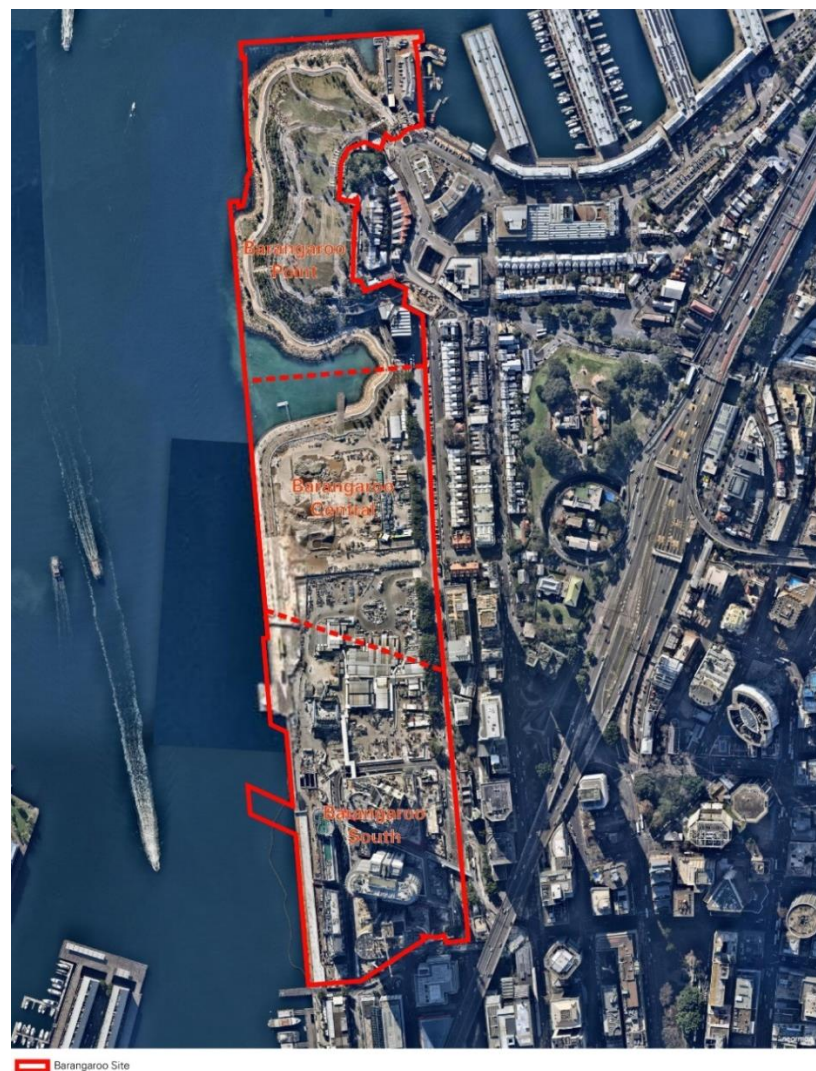


Figure 1 – Aerial Photo of Barangaroo

2.1.2 Building R4A Site

The Building R4A Site is located within Barangaroo South. **Figure 2** illustrates the location of site in relation to Barangaroo South, as approved under Concept Plan (Mod 8). Lendlease has divided Barangaroo South into three areas, as follows:

- Stage 1A – The southern-most portion of Barangaroo South, located to the south of Watermans Quay, comprising Blocks 1 – 3 and X as identified in Concept Plan (Mod 8) on which development has substantially progressed;
- Stage 1C – The Crown Sydney Hotel Resort development site, being Block Y under Concept Plan (Mod 8), which is surrounded on all sides by the Stage 1B area; and
- Stage 1B – The balance of the Barangaroo South Site, positioned in the northern-portion of Barangaroo South to the north of Waterman’s Quay, including Blocks 4A, 4B proposed under proposed Concept Plan (Mod 8) and surrounding land to the north and west for roads and public domain.

The Building R4A Site is contained within Stage 1B, and falls entirely within approved Concept Plan (Mod 8) Block 4A (see **Figure 2**). It is bounded by Waterman’s Quay to the south, Barangaroo Avenue to the west, Hickson Park to the north and Building R4B and Hickson Park to the East.



Figure 2 – Stages and development blocks within Barangaroo South – Block 4A in red outline

3.0 Methodology

3.1.1 Visual Analysis

To support the visual analysis, the relevant visual catchment of the Barangaroo Site has been defined and key public domain views, view corridors and public vantage points within and surrounding the site have been identified.

Barangaroo is visible from a wide catchment within Sydney. From a large number of initial views and vistas identified, the key public domain views were determined based on a series of inspections of the site and its surrounds and also having regard to the visual catchment and the identification of important views and vistas as established by the State government at the time of the original East Darling Harbour Competition and in the subsequent Concept Plan approval (as modified). The selection of vantage points has also had regard to the location of existing heritage items in the vicinity of the site that are visible from the public domain.

22 key vantage points for public domain views were selected to analyse the public view impacts.

These include the 21 vantage points for public domain views that were analysed as part of Concept Plan (Mod 8). These views were selected in order to allow for a comparative analysis of the proposed conceptual envelopes and proposed development. These also include the 19 potential visual catchment and view locations identified as relevant in the SEARs, being:

Hickson Road, Kent Street, Lime Street, Gas Lane, High Street, Sydney Observatory, Sydney Observatory Park, Clyne Reserve, Munn Reserve, Sydney Harbour Bridge, Pyrmont Bridge, Ballart Park Darling Island, Jones Bay Wharf Pyrmont, East Balmain, Darling Harbour, Blues Point, Millers Point, Sydney Opera House, and Cremorne Point.

The viewpoints of Sydney Observatory and Sydney Observatory Park have been combined into a single view despite being separately noting in the SEARs. This is in light of their close proximity and essential nature as a single vantage point.

In addition to the 19 public domain views required by the SEARs the location of Shelly Street, Gladesville Bridge, Watsons Bay and Sydney Wharf have been included in the visual analysis to allow for a comparison to the Concept Plan (Mod 8) assessment and key locations where the proposal could be viewed.

The locations of the photomontage images and direction of view are shown in **Figures 3 and 4** below.

The public domain vantage points selected for analysis provide representative views for three (3) categories of views as follows:

- **From the water:** Vantage points 12 (Ballarat Park), 13 (Pyrmont Park Pier Jones Bay Wharf), 14 (Balmain East), 15 (Darling Harbour), 16 (Blues Point), 17 (Opera House Western Forecourt), 18 (Cremorne Point), 22 (Sydney Wharf);
- **From public open space:** As above, in addition Vantage points 7 (Millers Point Observatory Hill), 8 (Clyne Reserve), 9 (Munn Reserve), 20 (Watsons Bay), 21 (Sydney Observatory Park);
- **From key streets:** Vantage points 1 (Hickson Road), 2 (Ken Street, 3 (Shelly Street), 4 (Lime Street), 5 (High Street), 6 (Gas Lane), 10 (Sydney Harbour Bridge), 11 (Pyrmont Bridge), 19 (Gladesville Bridge).

The vantage points selected for analysis in each of the categories of views provide representative views from all relevant directions, and from several positions within the visual catchment in relation to each category of view. They also provide for close as well as distant views.

The visual analysis has comprised a comparison of the 'before/approved' (Concept Plan Mod 8) against the 'proposed' development. The proposed photomontages included in the view analysis also illustrate Buildings R4B and R5 as well as the Crown Sydney Hotel Resort. Buildings R4B and R5 will concurrently be assessed with Building R4A and the Crown Sydney Hotel Resort has been approved. All of these buildings form a group of buildings in Barangaroo South. As such, it is considered necessary and appropriate to include each building in the Visual and View Impact Analysis for Building R4A.

The criteria utilised in the visual analysis is consistent with that adopted for Concept Plan (Mod 8). The criteria specifically relate to consideration of the Site, the local context and proposed built form and public domain elements of the proposal, qualitatively evaluating potential visual impacts. The features of the Site and the local context have been considered in regard to the current situation, as well as the expected situation under Concept Plan (Mod 8). The established principles of the Barangaroo Concept Plan (as modified) and the relevant environmental planning instruments have been taken into account in the visual analysis.

Views from key buildings have been separately analysed as part of the view analysis. Refer below.



Figure 3 – External Site Views

Source: *Virtual Ideas*

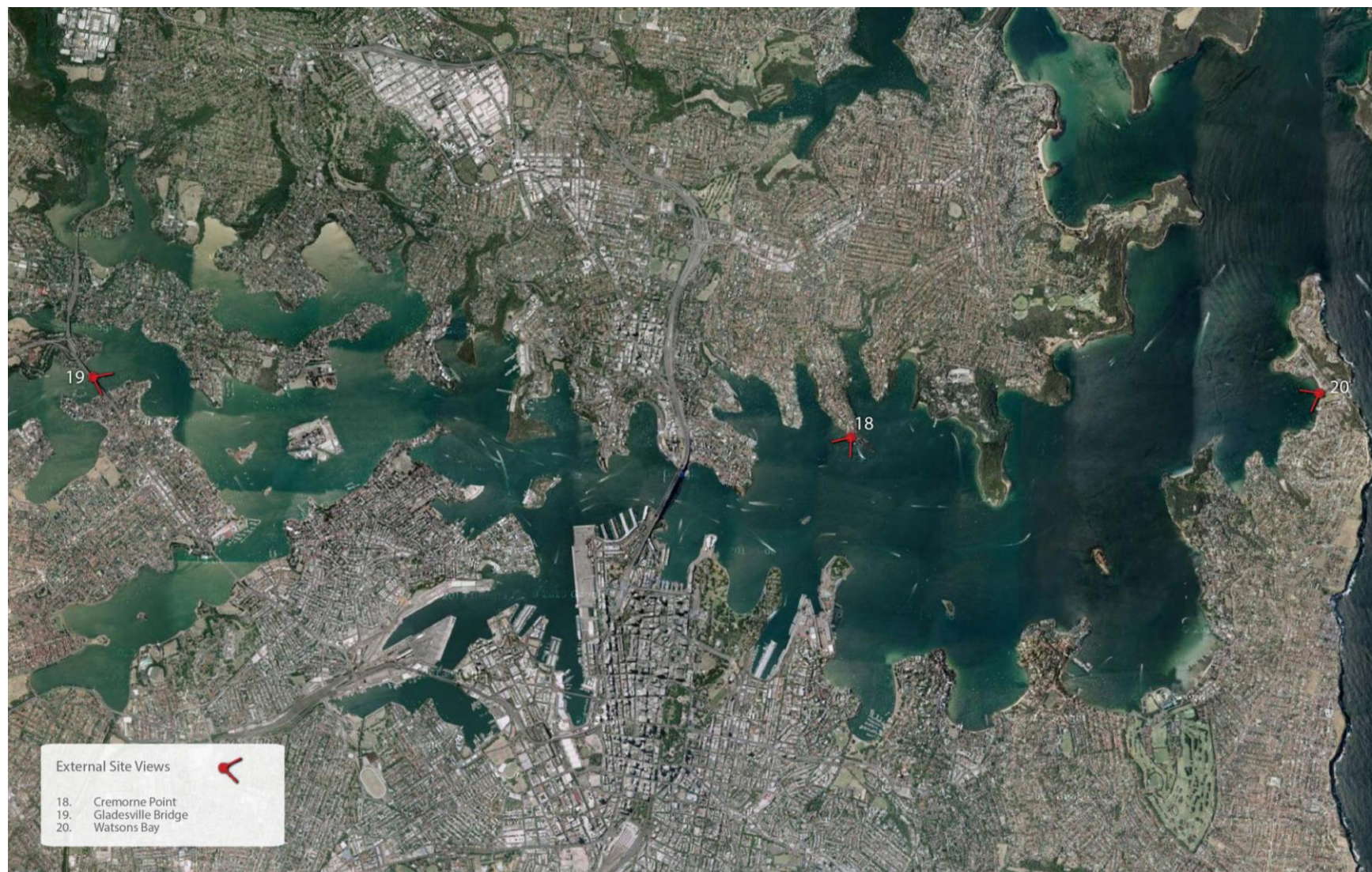


Figure 4 – External Site Views (broader context)

Source: Virtual Ideas

The photomontage images for each of the identified public domain views were taken at ground level (pedestrian eye level) to indicate what a pedestrian will see when travelling through or within the general vicinity of the site.

Photomontage images have been produced using a range of lens sizes between 17 and 40mm. Overlays (crop markers) showing longer lenses (35 mm and 50mm) have been included for each photomontage image to illustrate the effect of a longer lens. Using a 50mm lens as stated in the SEARs has the same effect as cropping the image presented using the selected lens.

It is not effective to use 50mm lenses in all circumstances as this would not produce a result where the buildings can be evaluated in respect to their surroundings. In addition, in most cases it has not been physically possible to take medium range and long range options for each view given the topography, vegetation and surrounding built form.

A Visual Impact Photomontage Methodology Report has been prepared by Virtual Ideas and is provided at **Appendix A**. The analysis concludes that the methodology adopted during the preparation of the exhibited photomontages is acceptable practice for the reasons summarised below; and it is consistent with the methodology used in the visual impact photomontages for Concept Plan (Mod 8).

The methodology and reasons for selection of lens sizes was considered in detail by the Department at the time of determination of Concept Plan Mod 4, and a consistent methodology was adopted for the visual and view analysis provided as part of Concept Plan MOD 6 and Concept Plan (Mod 8) given it is reasonable and also provides for comparison with the earlier iterations of the photomontages.

The Director General's Environmental Assessment Report in relation to Modification 4 concluded (p.54) that:

the approach, rational and methodology in the analysis undertaken and presented in the PPR are considered sound.

The Field of View of the Human Eye

There are varying opinions as to the accepted field of view (FOV) of the eye, ranging from 17 – 24 mm, depending on the source of information referenced. Regardless, the human eye has quite a wide FOV and is influenced by proximity to the subject being viewed. That is, when standing close to an item (e.g. a building), vision is focused towards the top, sides and bottom of the item. In addition, the human eye changes focus and target direction regularly and quickly, allowing large structures to be viewed in very short periods of time, effectively making the perceived FOV even larger.

The Perspective of the Human Eye

It is difficult to accurately reproduce what the human eye sees by the means of a printed image. As the back of the human eye is curved and the sensors on cameras are flat, the perspective of a photograph can look quite different to how items are seen in the real world, especially with a larger FOV, or wider lens.

The use of longer lenses (approximately 50mm) reduces the amount of perspective in images and therefore replicates what the human eye would see in reality more closely. However, longer lenses do not consider the FOV of the eye (as discussed above). This means that if a photo taken with a 50mm lens was compared to a real view in the same location that the photo was taken from, it would become very clear that the human eye can see much more of the surrounding information than what is captured by the photo.

Changing the FOV on a Digital Camera

The main distinction between using longer rather than wider lenses is the amount of information that is displayed at the edges of the subject. Changing lenses to a smaller FOV produces the same result as cropping a wide angle image, providing that the position and the angle of the camera remains constant while taking the photographs. In short, a lens with a wider FOV does not create an image that has incorrect perspective, rather it simply means that the perspective is extended at the edges of the image showing more of the surrounds in the images.

In the context of the above, it is clear that there is no accepted 'one size fits all approach' for lens selection. Longer lenses produce images closer to the perspective of the human eye, however the entirety of subjects as large as whole buildings and contextual surroundings may not be able to be shown. Using only 17mm lenses would result in the subject being further away and small in the image, but with greater context, which is not always appropriate when assessing visual impact.

For these reasons, Virtual Ideas considers that lens selection for the purposes of undertaking visual impact assessment for Barangaroo South needs to strike a balance between the FOV of the human eye and perspective, while also accurately displaying the built form in its surroundings.

3.1.2 View Analysis

Four (4) key buildings in the vicinity of the site have been identified as being impacted or potentially impacted on by the project in terms of private views. The key residential buildings are: Highgate, Georgia, Stamford Marque, and Stamford on Kent. The location of the four key buildings is shown in **Figure 5** below.



Figure 5 – Locations of Key Buildings

The key buildings were selected based on the sensitivity of land use, and on the basis of both proximity to the site and the extent to which existing views, vistas and outlook are likely to be affected by the project. The analytical process in selecting the key buildings took into account the height and orientation of the existing buildings, their location and available view corridors down streets and/or across the top of other foreground development towards the Sydney CBD, Darling Harbour or Sydney Harbour.

The four selected residential buildings are the same four residential buildings for which a detailed view impact analysis was undertaken as part of Concept Plan MODs 4, 6 and 8, as agreed by the Department. No new residential buildings that were not previously assessed will be impacted upon by the proposed modified development.

Consistent with the view impact methodology used in the assessment of Concept Plan Mods 4, 6 and 8, orthogonal and oblique analysis has been undertaken by JBA to determine view impacts on Kent Street residential buildings (see **Appendix B**). In summary:

- Orthogonal – the projection of uninterrupted views were taken from the west looking east as orthogonal to the residential buildings to establish which views would be affected; and
- Oblique – the orthogonal assessment methodology is a simplistic method of assessing the views, and as such, a more comprehensive assessment of view sharing has been considered, using an oblique methodology.

Two heights were taken as a source for views from each of the residential buildings at levels of RL59 and RL90. To measure a reasonable level of uninterrupted views and no loss of amenity from the residential buildings, an angle that matched the view angles of the original Concept Plan were used, which is an angle of 54° or greater than.

It is noted that the impact on the Sydney Observatory has been dealt with separately as part of the visual analysis and also in the Assessment of Impacts on Sydney Observatory letter prepared by UNSW Global and submitted under separate cover.

4.0 Visual Analysis – Public Domain Views

The location of the photomontage images for each of the identified key ground level public domain views, view corridors and vantage points are shown in **Figures 3 and 4** are:

- Hickson Road;
- Kent Street;
- Shelley Street;
- Lime Street;
- High Street;
- Gas Lane;
- Millers Point (Observatory Hill);
- Clyne Reserve;
- Munn Reserve;
- Sydney Harbour Bridge;
- Darling Harbour (Pyrmont Bridge);
- Ballaraat Park;
- Pyrmont Park Pier (Jones Bay Wharf);
- Balmain East;
- Darling Harbour;
- Blues Point;
- Opera House Western Forecourt;
- Cremorne Point;
- Gladesville Bridge;
- Watsons Bay;
- Sydney Observatory Park; and
- Sydney Wharf.

The following section provides a visual analysis in relation to each of these key vantage points in relation to the proposed development and the relevant planning instruments. This visual analysis has considered the Site, local context and proposed built form and public domain outcomes sought as part of the proposal. A full set of photomontages have been prepared by Virtual Ideas and are provided at **Appendix A** of this report.

The photomontage images show the current / existing view, the alignment of the 3D model, the massing of the Concept Plan (Mod 8) and also the proposed detailed design the subject of this State Significant Development Application.

4.1.1 Visual impact assessment matrix

The following table summarises the distance of view, extent of view, number of viewers and period of view to assist determining the potential visual impact (graded as high, medium or low). All views selected are public domain locations. It is noted that potential visual impact arising from change to an existing view may be both positive and negative. With the redevelopment of a vacant urban renewal site a high degree of change to view is inevitable. The construction of the proposed new elegant buildings can make a positive contribution to the city edge and sky line given their architectural merit.

Table 1 – Visual impact matrix

Reference	Public domain view	Distance	Extent of view	Number of viewers	Period of View	Potential Visual impact
1	Hickson Road	H	H	H	M	H
2	Kent Street	M	H	H	L	M
3	Shelly Street	L	L	M-H	L	L
4	Lime Street	L	L	M-H	L	L
5	High Street	M	H	L	H	M-H
6	Gas Lane	M	H	M	L	M
7	Millers Point (Observatory Hill)	M	H	M	H	H
8	Clyne Reserve	M	M	L	H	M
9	Munn Reserve	M	M	L	H	M
10	Sydney Harbour Bridge	M	M	H	L	M
11	Darling Harbour (Pyrmont Bridge)	M	M	H	M	M
12	Ballaraat Park	M	M	M	H	M
13	Pyrmont Park Pier	M	M	M	H	M
14	Balmain East	M	M	M	H	M
15	Darling Harbour	M	M	H	H	M-H
16	Blues Point	L	M	M	H	M
17	Opera House Western Forecourt	L	M	H	M	M
18	Cremorne Point	L	M	M	H	M
19	Gladesville Bridge	L	M	H	L	L
20	Watsons Bay	L	M	H	M	L
21	Sydney Observatory Park	M	H	M	M	M
22	Sydney Wharf	M	H	M	H	M

Key to analysis

Distance:	Within 100 m – high	Within 500 m – medium	Over 500 m – low
Extent of view:	Direct view – high	Direct view within a panoramic view – medium	An oblique or filtered view – low
Number of viewers	More than 500 daily – high	More than 100 daily – medium	Less than 100 daily – low
Period of view	Long term (static) – High	Short term – Medium	Fleeting – Low

Potential visual impact – high, medium or low

4.1.2 Hickson Road

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Hickson Road is taken at **Vantage Point 1** at a camera RL of 17.5 metres using a 24 mm lens. This is the view seen by a pedestrian standing on the overhead bridge.

Existing views along Hickson Road are presently framed to the east by the sandstone cutting and the High Street alignment and a generally continuous wall or urban form along Kent Street and, in part, the lower-rise developments along the eastern edge of Hickson Road. The western edge is an open view in part, while in other parts it is obstructed by various plantings and structures including Commercial Buildings C3, C4 and C5 currently at various stages of construction. The existing trees along the western edge of Hickson Road filter views towards the water for pedestrians and motorists alike.

Currently, Hickson Road is not a major pedestrian thoroughfare. Public domain views across the Barangaroo site are therefore not enjoyed by a high volume of pedestrians. Views across the site for drivers are equally limited in duration and extent.

The proposed development, as a part of the family of residential buildings in Stage 1B, continues to frame the edge of Hickson Road.

As is demonstrated by the comparison of the Concept Plan (Mod 8) Block R4 envelope and the proposed detailed design of Building R4A from Vantage Point 1, the proposal comprises a taller and slimmer building form than that approved under Concept Plan (Mod 8). The proposal will have the effect of opening up views through the Barangaroo Site from the pedestrian bridge over Hickson Road. Therefore any potential impacts considered during the Concept Plan (Mod 8) Visual and View Impact Analysis have been slightly reduced through the proposed building form. A sense of space is provided around Building R4A, with considerable separation provided to the proposed Crown Sydney Hotel Resort. A new view corridor is created to the south-west between Building R4A and the Crown Sydney Hotel Resort when viewed from Vantage Point 1.

View lines towards the harbour and to Pyrmont and Balmain East beyond will continue to be maintained by the proposal. All views along Hickson Road through to the southern CBD and the Darling Park development, which terminates this view, are also retained.

The visual impact of the proposed development when viewed from Hickson Road is generally less than that considered as part of the Concept Plan (Mod 8). The proposed building is slender, utilising a smaller horizontal proportion of the approved envelope under Concept Plan (Mod 8) and providing greater separation to the approved Crown Sydney Hotel Resort, permitting greater sightlines and views.

4.1.3 Kent Street

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Kent Street (corner of Margaret Street) is taken at **Vantage Point 2** at a camera RL of 17.9 metres using a 20 mm lens.

There are currently only limited views to or over the Barangaroo site from Kent Street given the existing form of development along its western edge, and the limited openings created by streets intersecting it at a perpendicular angle. The most significant views to or through Barangaroo South occur at Margaret Street and Gas Lane. This section addresses the Margaret Street view while Gas Lane is addressed at **Section 4.1.6**.

The existing view westwards at the intersection of Kent Street and Margaret Street is one dominated by the Western Distributor viaduct which sits high within the view corridor. The experience of a sky view is cluttered and partially framed only by development both beneath and surrounding the viaduct. There are no major existing views of any significance to water or nearby foreshores from this location. There are some wider views to the ridgelines of Pyrmont and Balmain.

The completed/under construction Commercial Buildings C3, C4 and C5 sit within the view corridor and act to terminate the present view westwards from Kent Street. The proposed Building R4A is only marginally visible in the view, siting to the north of Commercial Buildings C5 but largely obscured by the Western Distributor viaduct and an existing tree canopy. The addition of Building R4B in this view is considered to have a minimal impact given the current obstructions and the lower value of the view.

The visual impact of the proposal when viewed from Kent Street is generally the same as that in Concept Plan (Mod 8), being acceptable in accordance with the established urban design principles for the Barangaroo Site and in light of the largely obstructed nature of Building R4A in the view.

4.1.4 Shelley Street and Lime Street

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Shelley Street (from King Street bridge) is taken at **Vantage Point 3** at a camera RL of 11.8 metres using a 20 mm lens. The Lime Street view is taken at **Vantage Point 4** at a camera RL of 6.7 metres using a 22mm lens.

Shelley and Lime Streets are both located within the King Street Wharf precinct and principally run parallel in a north-south direction. At present these streets both allow for framed or open views to the north across the Barangaroo site.

The Shelley Street view corridor is framed and generally aligned to a direct view north. Views along Shelley Street will be terminated by the approved (and under construction) Commercial Building C5. The proposed development is not visible from Vantage Point 3 as it sits behind Commercial Building C5. As such, the visual impact of the proposed development on Vantage Point 3 is negligible.

The proposed Building R4A will be slightly visible within the Lime Street view corridor as seen from Vantage Point 4 looking northwards. A portion of Building R4A will be visible to the west of Commercial Building C5, continuing the framing principle of Concept Plan (Mod 8) for allowing the approved iconic Crown Sydney Hotel Resort to be perceived at the terminus of the Lime Street view corridor.

The change in the view corridor along Lime Street from Concept Plan (Mod 8) to the proposed development is minimal, with Building R4A being contained within the block envelope. The approved design of the Crown Sydney Hotel Resort within the Block Y envelope suggests that there will be significant separation provided between Building R4A and the approved Crown Sydney Hotel Resort, ensuring the Crown Sydney Hotel Resort can be appreciated in the view corridor. Overall, there is considered to be the potential for a positive visual impact in so far as allowing a view to a new significant building in the streetscape.

4.1.5 High Street

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from High Street is taken at **Vantage Point 5** at a camera RL of 16.0 metres using a 25 mm lens.

Views along High Street are presently framed only to the east by low-rise residential development. The western edge is an open view across the Barangaroo Site towards the south and west, in part obstructed by fencing and plantings and Commercial Buildings C3, C4 and C5. The waterway adjacent to the Barangaroo Site is visible.

There is an established understanding under Concept Plan (Mod 8) and previous revisions of the Concept Plan that the view from High Street would be changed as a result of the development of Barangaroo. This change can be expected in the redevelopment of a large site which seeks to repair the fabric of a significant edge of a global CBD.

The proposed Building R4A development is situated within the approved Concept Plan (Mod 8) block envelope. The proposal comprises a slender tower form, largely separated from the approved Crown Sydney Hotel Resort and enabling the creation of a new view corridor between the buildings.

The slender nature of Building R4A results in a large proportion of the block envelope being unused. This allows for views across and through the Barangaroo Site from Vantage Point 5. View corridors are maintained to the west and north-west towards the harbour and to Pyrmont and Balmain East beyond. The Building R4A proposal will have no impact on water views when compared with the approved Concept Plan (Mod 8) envelope.

4.1.6 Gas Lane

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Gas Lane is taken at **Vantage Point 6** at a camera RL of 21.7 metres using a 17mm lens.

Gas Lane is a local street that runs in an east-west direction from Kent Street and which terminates at its lower level T-junction with Jenkins Street. The views from Gas Lane change dependent upon the viewer's location. At its high point at the junction with Kent Street, existing views are framed by buildings and are generally across the harbour's waters towards White Bay, Jones Bay Wharf at Pyrmont, and distant views through to Rozelle. There is also a high degree of sky view. There is no view to the Barangaroo Site's foreshore.

The availability of views at the lane's termination are reduced as the lane descends. At Jenkins Street, as a result of existing development enveloping the viewer, a sky view is largely what remains. There are no existing available vistas through the existing development through to the foreshore or the water.

The Building R4A proposal will not have any impact on available water views from Gas Lane, in accordance with the block envelope approved under Concept Plan (Mod 8). The proposal results in some loss of sky view, as anticipated under Concept Plan (Mod 8) and previous revisions of the Concept Plan. The slender nature of the tower however, when compared with the block envelope, introduces slight sky view opportunities on the towers southern side.

Building R4A contributes to framing the view down Gas Lane towards the approved Crown Sydney Hotel Resort which will be a positive addition to the view line given its iconic status. The visual impact of the proposal when viewed from Gas Lane is the same, if not reduced, as that envisaged in Concept Plan (Mod 8).

4.1.7 Millers Point (Observatory Hill)

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Millers Point (Observatory Hill) is taken at **Vantage Point 7** at a camera RL of 43.2 metres using a 40mm lens.

At present, the best views and vistas enjoyed at Millers Point are those from Observatory Hill Park. The park's size and height allows for panoramic views to the south-west, from Pyrmont and White Bay around to East Balmain, Goat Island, and to the northern shores of Sydney Harbour. Much of this view includes water views, particularly from White Bay and to the north. There are only extremely minor glimpses to water in the vicinity of Pyrmont, where these views are dominated by that peninsula's new built form.

Significant water views, and views from White Bay around to the north, will not be altered by the proposed development.

The focus of this assessment is on views south-west towards Pyrmont and beyond. The proposed Building R4A is slender and when viewed with the indicative design of Building R4B, there are opportunities for sky views between the two buildings. A significant separation is also provided between Building R4A and the approved Crown Sydney Hotel Resort, allowing for generous sky view opportunities. The separation provided between Buildings R4A and R4B emphasises the slender nature of the towers and permits a feeling of space around the family of residential buildings.

Whilst the proposed development does alter the south-west views from Observatory Hill, it provides an opportunity for the appreciation of a high quality family of residential buildings designed by a world renowned architect in a precinct which is integrated into the urban fabric of Sydney's CBD. The visual impact of the proposal when viewed from Observatory Hill is similar to that envisaged in Concept Plan (Mod 8), although somewhat reduced through the introduction of greater spacing around Building R4A and the limited use of the approved maximum block envelope.

4.1.8 Sydney Observatory Park

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Sydney Observatory Park is taken at **Vantage Point 21** at a camera RL of 41.21 metres using a 17 mm lens.

The view quality from Sydney Observatory Park is similar to those described above for Observatory Hill. Views from Sydney Observatory Park are partially obstructed at a lower level by existing trees on the western edge of the park. Views readily available from White Bay around to the north will be uninhibited by the Barangaroo development.

As with Vantage Point 7, the focus of this assessment is on the views south-west towards Pyrmont and beyond. Building R4A does not impact any views towards buildings at Pyrmont; rather there will be an effect on the amount of sky view available. This impact was assessed in Concept Plan (Mod 8) and it was determined that the essence of the view will not materially change. This assessment is reaffirmed by the detailed proposal of Building R4A which does not seek to utilise the maximum approved block envelope.

The slender form of Building R4A, along with the separation distances provided to Building R4B and the approved Crown Sydney Hotel Resort, allows for opportunities for sky views between the buildings.

Overall, a sense of separation is created around Building R4A and on balance, there are greater sky view opportunities available when compared to Concept Plan (Mod 8).

4.1.9 Clyne Reserve

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Clyne Reserve is taken at **Vantage Point 8** at a camera RL of 20.78 metres using a 25mm lens.

Views south from Clyne Reserve are presently sky views only, framed on the east by low-rise residential development and on the west by chain-link fencing. Plantings of various sizes can be seen on both sides of the view corridor. However, views are dominated by the communications tower located on the western side of Merriman Street (it is noted that the tower is approved for demolition).

The detailed Building R4A proposal is within the approved Concept Plan (Mod 8) block envelope, ensuring that the visual impacts assessed to date remain consistent. The slender nature of Building R4A increases the opportunities for sky viewing and creates a clear separation between Building R4A and the approved Crown Sydney Hotel Resort.

When viewed with the indicative design of Building R4B and the Crown Sydney Hotel Resort, the detailed Building R4A contributes to creating a stepped form. The visual impact of the proposal when viewed from Clyne Reserve is less than that under Concept Plan (Mod 8).

4.1.10 Munn Reserve

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Munn Reserve is taken at **Vantage Point 9** at a camera RL of 18.12 metres using a 25 mm lens.

Views south from Munn Reserve are presently of development to the south including the western edge of the CBD, Darling Harbour and Pyrmont, and Commercial Buildings C3, C4 and C5. Sky views are also available. Views are framed to the east by a generally continuous wall of urban form along Kent Street and lower-rise residential development along the eastern edge of High Street. On the west views are framed in the foreground by the heritage-listed Dalgety Bond Store, which has been converted into commercial offices. Views from Munn Reserve are in part obstructed by fencing and plantings.

The Building R4A proposal is within the approved Concept Plan (Mod 8) block envelope. The Building R4A design is slender and vertically articulated to provide separation to the approved Crown Sydney Hotel Resort and enhance sky view opportunities when compared to the approved Concept Plan (Mod 8) block envelopes.

On balance, the detailed design of Building R4A provides greater sky view opportunities when compared to approved Concept Plan (Mod 8). As such, the visual impact of the proposal when viewed from Munn Reserve is less than that under Concept Plan (Mod 8).

4.1.11 Sydney Harbour Bridge

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from the Sydney Harbour Bridge is taken at **Vantage Point 10** at a camera RL of 47.63 metres using a 25mm lens.

Views south from the Sydney Harbour Bridge typically take in the existing Kent Street commercial and residential buildings, Observatory Hill, and panoramic sky and water views from Pyrmont and White Bay to East Balmain, Goat Island, and the northern shores of Sydney Harbour.

Concept Plan (Mod 8) has established a principle of the continuation of the Sydney CBD form. The detailed design of Building R4A is within the approved block envelope. Building R4A adopts a slender form, and when viewed with the indicative design for Building R4B and the approved Crown Sydney Hotel Resort, there is clear separation and the achievement of a sense of space.

When viewed from the Sydney Harbour Bridge, the approved Crown Sydney Hotel Resort and Buildings R4A and R4B create a stepped form tapering down to the existing buildings along the western alignment of Sydney's CBD. There is a positive relationship achieved between these buildings and the existing fabric of the CBD, resulting in the buildings appearing ordinary in the view.

The proposal continues to retain views to and of Observatory Hill and will not impact on the panoramic sky and water views to the south and south-west. The visual impact of the proposal when viewed from the Sydney Harbour Bridge is less than that under approved Concept Plan (Mod 8). Moreover, the addition of Building R4A and the future buildings within the Barangaroo Site in the view will contribute to extending the skyline of the city which can be considered as a positive advancement of Sydney as a global city.

4.1.12 Darling Harbour and Pyrmont Bridge

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Pyrmont Bridge is taken at **Vantage Point 11** at a camera RL of 13.6 metres using a 22mm lens. The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Darling Harbour is taken at **Vantage Point 15** at a camera RL of 1.93m using a 22mm lens.

Views from the Pyrmont Bridge and Darling Harbour can vary greatly depending on the viewer's location. As an example, northerly and north-eastern views from Pyrmont Bridge are presently framed and dominated by developments in the CBD and cultural buildings at Pyrmont's foreshore. The CBD generally steps to the foreshore with its topography when viewed from certain locations. In part the view highlights a wall-like form to the CBD and amplifies underdeveloped reclaimed land as a key opportunity.

Views may in part also be enjoyed through to the northern shore of Sydney Harbour and its silhouette and markers, such as North Sydney and Royal North Shore Hospital.

Concept Plan (Mod 8) and previous variations of the Concept Plan have established that Barangaroo will transform the present void into a silhouette that articulates a high level of activity and interest. Building R4A will contribute to this transformation.

The detailed design of Building R4A is within the approved Concept Plan (Mod 8) block envelope. The height of Building R4A accords with the stepping built form of Commercial Buildings C3, C4 and C5, providing a transition in height away from Darling Harbour.

Building R4A is largely located behind the group of Commercial Buildings (C3, C4 and C5) when viewed from the Pyrmont Bridge and Darling Harbour, rendering the majority of the building to be obstructed in the view. Furthermore, the detailed design of Building R4A does not extend beyond the approved Concept Plan (Mod 8) block envelope to the west, ensuring that views to the north shore will remain and suitable separation will be provided to the approved Crown Sydney Hotel Resort.

The form, siting and scale of Building R4A clearly allow it to be perceived as a component of the Barangaroo Site. As such, the ability to discern the existing CBD from the Barangaroo Site is maintained. The visual impact of the proposal when viewed from the Pyrmont Bridge and Darling Harbour is consistent with that approved under Concept Plan (Mod 8).

4.1.13 Ballaraat Park, Pyrmont Park Pier (Jones Bay Wharf) and Balmain East

The following photomontage images of the proposal and the Concept Plan (Mod 8) block envelopes have been provided:

- Ballaraat Park taken at **Vantage Point 12** at a camera RL of 3.9 metres using a 17mm lens.
- Pyrmont Park Pier (Jones Bay Wharf) taken at **Vantage Point 13** at a camera RL of 4.2m using a 24mm lens.
- Balmain East taken at **Vantage Point 14** at a camera RL of 11.6 m using a 17mm lens.
- Sydney Wharf taken at **Vantage Point 22** at a camera RL of 2.8 using a 19mm lens.

When viewed from Ballaraat Park, Pyrmont Park Pier, Balmain East and Sydney Wharf, the existing Barangaroo Site presently as a partially vacant construction site on the foreshore of the western CBD. The Kent Street tower buildings are a significant wall to the north-western edge of the CBD with few discernable gaps. Some views of Observatory Hill Park and the low scale residential dwellings at Millers Point are available.

There is an established understanding that the development of Barangaroo will alter the visual appearance of the western edge of Sydney's CBD. This transformation will comprise the addition of new buildings in a world-class precinct which focuses on the highest quality urban design and showcases the principles of sustainability.

Building R4A contributes to this transformation, providing a high quality residential building designed by a world renowned architectural practice. Building R4A is within the approved Concept Plan (Mod 8) block envelope. Building R4A offers a refined built form which is slender and permits visual gaps between it and the adjoining buildings comprising Building R4B and the approved Crown Sydney Hotel Resort. The result of the slender form of Building R4A is that view corridors are permitted through the Barangaroo Site to the remainder of the CBD.

Views from Ballaraat Park and Sydney Wharf are offered additional sky view opportunities between Building R4A and the neighbouring future buildings when compared to approved Concept Plan (Mod 8). When viewed from Balmain East, Building R4A plays a key role in achieving a transition in form from the tallest building intended for the Barangaroo Site, being the approved Crown Sydney Hotel Resort, to the Commercial Buildings C3, C4 and C5. Similarly from Sydney Wharf, the stepped form of the Barangaroo built form is achieved by the scale of Building R4A and its relationship to the future Building R4B and approved Crown Sydney Hotel Resort.

In essence, the Building R4A proposal will contribute to redefining the western edge of the CBD as viewed from Ballaraat Park, Pyrmont Park Pier, Balmain East and Sydney Wharf, presenting a new silhouette which signifies a new activity hub.

4.1.14 Blues Point

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Blues Point is taken at **Vantage Point 16** at a camera RL of 14.5 metres using a 21mm lens.

The views presently enjoyed from Blues Point towards the Barangaroo Site are generally the reciprocal of those from Darling Harbour, albeit significant views of Walsh Bay and Observatory Hill are available, where they are presently only partially discernible or blocked from the south and south-west by existing development.

It has been established in approved Concept Plan (Mod 8) and previous revisions of the Concept Plan that the development of Barangaroo will complete the east-west silhouette of the CBD. The detailed Building R4A design accords with this principle, providing an extension of the CBD and contributing to the group of buildings at Barangaroo (approved/ proposed). Furthermore, the scale of Building R4A plays a role in achieving a stepped form to the approved Crown Sydney Hotel Resort, bookending the western edge of Sydney's CBD.

The proposal will not have any impact upon views to (or the quality of those views) Millers Point, Walsh Bay or Observatory Hill consistent with approved Concept Plan (Mod 8). These landmarks and locations are nestled into the silhouette of Sydney's CBD. The Building R4A proposal, along with the other buildings within Barangaroo will contribute to this silhouette.

The visual impact of the proposal when viewed from Blues Point is consistent with that under Concept Plan (Mod 8).

4.1.15 Opera House Western Forecourt

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from the Opera House Western Forecourt is taken at **Vantage Point 17** at a camera RL of 4.68 metres using a 25mm lens.

The Building R4A proposal is within the approved Concept Plan (Mod 8) block envelope. Building R4B and the approved Crown Sydney Hotel Resort combine with Building R4A to provide a stepped extension of Sydney's CBD when viewed from the Opera House Western Forecourt.

Building R4A is proposed as a slender tower, with clear spatial gaps to Building R4B and the approved Crown Sydney Hotel Resort. The relationship formed between each of these buildings through the stepped height and visual separation ensures that they appear as a natural extension of the CBD.

The proposed development will not have any effect on the ability to appreciate views to the low scale Rocks area and Harbour Bridge approach. Furthermore, a significant level of sky view opportunities are retained and even enhanced due to the slender nature of Building R4A.

The visual impact of the proposal when viewed from the Opera House Western Forecourt is consistent with that under Concept Plan (Mod 8).

4.1.16 Cremorne Point

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Cremorne Point is taken at **Vantage Point 18** at a camera RL of 6.5 metres using a 40mm lens.

The views presently enjoyed from Cremorne Point towards the Barangaroo Site are generally panoramic, encompassing the Sydney CBD (from east to west), Sydney Tower, the Opera House, and further west, the Sydney Harbour Bridge and North Shore.

The proposal will not impact upon any views to (or the quality of those views) the Opera House and Sydney Harbour Bridge, which sit in the foreground of these views. The Building R4A proposal will contribute to completing the form of Sydney's CBD as envisaged under Concept Plan (Mod 8) and given the architectural merits of the buildings, may be considered to enhance the quality of the view. The proposed Building R4A design is within the approved Concept Plan (Mod 8) block envelope.

The slender nature of Building R4A, accompanied with the expected slim form of Building R4B and the approved Crown Sydney Hotel Resort, results in a natural progression of Sydney's CBD. The proposed development, in accordance with the Concept Plan (Mod 8), has no impact on views from this location, which take in Sydney's iconic landmarks.

4.1.17 Gladesville Bridge

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Gladesville Bridge is taken at **Vantage Point 19** at a camera RL of 41.57 metres using a 40mm lens.

The views presently enjoyed from Gladesville Bridge towards the Barangaroo Site are generally panoramic, encompassing the North Shore, Sydney Harbour Bridge, the Sydney CBD (from north to south), Sydney Tower and ANZAC Bridge. In the foreground the view is dominated by local residential development of low and medium scale as well as tree canopies.

Given the distance of views from Gladesville Bridge to the Barangaroo Site, the effect of Building R4A is solely to provide additional buildings to the skyline of the Sydney CBD. The proposed Building R4A design is within the approved Concept Plan (Mod 8) block envelope. Importantly, the proposal will not impact upon any views to (or the quality of those views) the Sydney Harbour Bridge in the north, Sydney Tower or ANZAC Bridge in the south.

Overall, there is considered to be a negligible impact on views from Gladesville Bridge. Building R4A, along with the other buildings to be provided at Barangaroo, will contribute to the Sydney CBD skyline, enhancing the skyline as viewed from the Gladesville Bridge.

4.1.18 Watsons Bay

The photomontage image of the proposal and the Concept Plan (Mod 8) block envelopes from Watsons Bay is taken at **Vantage Point 20** at a camera RL of 1.85 metres using a 40mm lens.

The views presently enjoyed from Watsons Bay to the west are generally panoramic, framed by the southern and northern headlands. The Sydney CBD, including Sydney Tower, is located to the centre of the view, and the top of the Sydney Harbour Bridge is visible over the northern headland. In the foreground the view is dominated by the waters of Watsons Bay.

Given the distance of views from Watsons Bay to the Barangaroo Site, the effect of Building R4A is solely to provide additional buildings to the skyline of the Sydney CBD. The proposed Building R4A design is within the approved Concept Plan (Mod 8) block envelope. Importantly, the proposal will not impact upon any views to (or the quality of those views) Sydney Tower or the partial views of the Sydney Harbour Bridge.

There is considered to be a negligible impact on views from Watsons Bay. Building R4A, along with the other buildings to be provided at Barangaroo, will contribute to the Sydney CBD skyline, enhancing the skyline as viewed from the Watsons Bay.

5.0 Visual Analysis – Private Views

The locations of the key buildings that are impacted or potentially impacted by the development in terms of private views are shown in **Figure 5**. The buildings are:

- Highgate (127 Kent Street);
- Georgia at (155 Kent Street);
- Stamford Marque at (161 Kent Street); and
- Stamford on Kent at (187 Kent Street).

There is a range of other buildings on Kent Street, and within the King Street Wharf and Shelley / Lime Street precincts that will also have some impact in terms of views and outlook.

The Rogers Stirk Harbour + Partners View Analysis that accompanied Concept Plan (Mod 8), determined the extent of the view impact to the four Kent Street residential buildings (as listed above), and demonstrated the change in views, the retention of views and the gain in views of Concept Plan (Mod 8) compared to the previous approval. In particular, the analysis demonstrated that view sharing will be achieved from the majority of levels of the adjacent residential buildings rather than maximising views from the upper levels.

Previous view studies (prepared in support of the Concept Plan and its subsequent modifications) have addressed impacts upon private views, view sharing and outlook. These have focused on the most significant and most-densely occupied buildings along Kent Street which presently enjoy largely unobstructed views. A review of anticipated impacts upon these buildings from the Building R4A proposal is addressed below, with reference to approved Concept Plan (Mod 8).

5.1 Views from Key Residential Apartment Buildings

JBA has prepared a View Analysis Report (see **Appendix B**) to specifically assess the impacts of proposed Building R4A on views from residential units on Kent Street.

The visual analysis consists of Building R4A being orthogonally projected onto the residential elevation of four apartment buildings on Kent Street (Highgate, Georgia, Stamford Marque and Stamford on Kent) to compare the visual impact of the indicative scheme in Concept Plan (Mod 8) to the proposed Building R4A development.

The oblique view analysis demonstrates that view sharing will be achieved under approved Concept Plan (Mod 8) by having taller and more slender buildings (including Building R4A) with large spaces in between, thereby enabling oblique views and view corridors. These views are also enhanced by the significant distances between the proposed buildings and the residential units on Kent Street.

Table 2 provides a comparison of the total view angle achieved under approved Concept Plan (Mod 8), the proposed design for Building R4A and indicative design for R4B and the approved Crown Sydney Hotel Resort.

Table 2 – Comparison of existing and approved view angles and view angles maintained in Mod 8

Level	Highgate	Georgia	Stamford Marquee	Stamford on Kent
Lower Levels – Level 15 (RL 59.699)				
Total View Angle under approved Concept Plan (Mod 8)	91°	85°	79°	67°
Total View Angle with Building R4A	92°	87°	80°	61°
Upper Levels – Level 25 (RL 90.187)				
Total View Angle under approved Concept Plan (Mod 8)	91°	85°	79°	67°
Total View Angle with Building R4A	92°	87°	80°	61°

It is evident from **Table 2** that all oblique views have been increased except for the views from the Stamford on Kent. This view relates to the space between Building R5 and Commercial Building C3, and is therefore not relevant for this Visual and View Impact Analysis.

The view impact on each of the apartment buildings in regard to Building R4A is described in detail below.

5.1.1 Highgate

- The zone of potential view impact from Highgate at 127 Kent Street principally affects the west facing elevation of that building only, relating solely to views to the west and south-west. Views to the north-west, north, east and south from Highgate will be unaffected by Building R4A.
- The analysis in **Table 2** shows that the total view angles for Highgate, the most northerly building, are increased by 1° as a result of Building R4A. The oblique view corridor between Building R4A and the indicative Building R4B design has been increased by 1°. The proposal allows for two view corridors; one between Building R4A and Building R4B and another between Building R4A and the approved Crown Sydney Hotel Resort.
- Highgate is located north of the alignment of Gas Lane, and therefore north of proposed development Blocks 4A and 5. Significant northerly views will be retained from both the lower and upper levels of this building given the development on Central Barangaroo is restricted to a maximum height of RL 34, and development further to the north on Block 5 is restricted to a maximum height of RL 29.
- Whilst some westerly and south-westerly views are impacted by the proposal, new view corridors are created in excess of those in Concept Plan (Mod 8) offering additional sky and water views.
- While views to the west and south-west are impacted, there is anticipated to be a new public open space (Hickson Park) to the north of the built form at Barangaroo South, increasing the separation between Highgate and Building R4A, thus improving foreground outlook from all levels of the building.
- The visual impact of Building R4A when viewed from Highgate is improved in comparison to Concept Plan (Mod 8).

5.1.2 Georgia

- The zone of potential view impact from Georgia at 155 Kent Street principally affects the west facing elevation of that building only, and is related solely to views to the west. Views to the north, north-west, east and south from Georgia will be unaffected by Building R4A.

- The analysis in **Table 2** shows that the total view angles for Georgia are increased by 2° as a result of the Building R4A proposal. The oblique view corridor between Building R4A and the indicative Building R4B design has been increased by 1° and the corridor between Building R4A and the approved Crown Sydney Hotel Resort has also increased by 1°. Views to the north are maintained, and views between buildings to the south-west are largely unaffected.
- Georgia is located north of the alignment of Gas Lane, and therefore north of proposed development Blocks 4A and 5. Significant northerly views will be retained from both the lower and upper levels of this building given the development on Barangaroo Central is restricted to a maximum height of RL 34, and development further to the north on Block 5 is restricted to a maximum height of RL 29.
- Whilst some westerly and south-westerly views are impacted by the proposal, new view corridors are created in excess of those in Concept Plan (Mod 8) offering additional sky and water views.
- While views to the west and south-west are impacted, there is anticipated to be a new public open space (Hickson Park) to the north of the built form at Barangaroo South, increasing the separation between Georgia and Building R4A, thus improving foreground outlook from all levels of the building.
- The visual impact of Building R4A when viewed from Georgia is improved in comparison to Concept Plan (Mod 8).

5.1.3 Stamford Marque

- The zone of potential view impact from Stamford Marque at 161 Kent Street affects the west facing elevations of that building, with the principal impact being to the western façade. Views to the north, east and south will be unaffected by Building R4A.
- The analysis in **Table 2** shows that the total view angles for Stamford Marque are increased by 1° as a result of the Building R4A proposal. The oblique view corridor between Building R4A and the indicative Building R4B design has been increased by 1°. Views to the north are maintained.
- Stamford Marque is located north of the alignment of Gas Lane, and therefore north of proposed development Blocks 4A and 5. Significant northerly views will be retained from both the lower and upper levels of this building given the development on Central Barangaroo is restricted to a maximum height of RL 34, and development further to the north on Block 5 is restricted to a maximum height of RL 29.
- Whilst some westerly and south-westerly views are impacted by the proposal, new view corridors are created in excess of those in Concept Plan (Mod 8) offering additional sky and water views.
- While views to the west and south-west are impacted, there is anticipated to be a new public open space (Hickson Park) to the north of the built form at Barangaroo South, increasing the separation between Stamford Marque and Building R4A, thus improving foreground outlook from all levels of the building.
- The visual impact of Building R4A when viewed from Stamford Marque is improved in comparison to Concept Plan (Mod 8).

5.1.4 Stamford on Kent

- The zone of potential view impact from Stamford on Kent at 187 Kent Street affects the north, south and west facing elevations of that building, with the principal impact being to the western façade. Views to the north, east and south will be unaffected by Building R4A.

- The analysis in **Table 2** shows that the total view angles for Stamford on Kent, the most southerly building, are reduced by 6° at both the lower and upper levels. These reductions relate to the oblique view corridor between Building R5 and Commercial Building C3, and are therefore not relevant for this assessment. In comparison to the Concept Plan (Mod 8) indicative design, the limited sky view available at a high level between Buildings R4A and R4B has been reduced due to the siting of both buildings. Despite this, sky view opportunities are still available at a high level between Building R4B and Commercial Tower C3 and also between Building R4A and the approved Crown Sydney Hotel Resort. These oblique view lines, available at both the upper and lower levels, provide alternative sky views.
- North-westerly views, significant views north of the alignment of Gas Lane will be largely retained given the restriction of maximum building height within Barangaroo Central, RL 34. Stamford on Kent is understood to have a maximum height of RL 102, and its elevated position means that views from the mid and upper levels in this direction, including views to the harbour's edge to the north-west, will remain substantially unaffected across the top of new buildings. These north-westerly views offer both sky and water conditions.
- The new significant public open space / parkland (Hickson Park) to the north of Building R4A will open up views from Stamford on Kent to the north-west and provide a pleasant foreground outlook from all levels of the building.
- The visual impact of Building R4A when viewed from Stamford on Kent is generally consistent with Concept Plan (Mod 8).

6.0 Conclusion

Building R4A is located at the northern end of Barangaroo South and is one of a number of tall, slender towers that comprise the built form of the precinct. The scale of Building R4A is commensurate with the location of the Barangaroo Site within Sydney's CBD and with the other new buildings to be delivered in Barangaroo.

Building R4A will be visible in views from key public domain locations and from within residential apartment buildings. The detailed Building R4A design is within the Concept Plan Block 4A envelope. Given the slenderness of the tower, Building R4A presents greater opportunities for sky viewing.

On balance, Building R4A provides separation between the adjoining future buildings, being Building R4B and the approved Crown Sydney Hotel Resort. The result of this separation is view lines being maintained across the Barangaroo site and the ability for a greater appreciated of sky views.

The proposal provides an elegant, new high quality residential building that is part of a composition of three related buildings, designed by a world renowned architectural practice. The development of Building R4A will contribute to the world-class nature of Barangaroo and will contribute in extending the western corridor of the Sydney CBD.

Overall, Building R4A will not affect the relevant and appropriate view, vista, outlook and visual impact objectives previously approved, and this analysis shows that the impacts of the proposal are consistent with those identified in Concept Plan (Mod 8).