Public Domain Views Analysis

SSDA -10385 Kambala Sports Precinct Redevelopment

Report prepared for: Kambala School

by Dr Richard Lamb

April 2020

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Executive Summary

Objectives

The objective of this report is to prepare Views Analysis (VA) of Public Domain views to accompany the DA for redevelopment of the Kambala School Sports Precinct, 794 New South Head, Rose Bay (KSP). Richard Lamb and Associates (RLA) have prepared the VA of public domain views.

This VA includes certification of the accuracy of the preparation of photomontages prepared by Arterra Interactive that are required to accompany the Visual Impact Assessment (the VIA) by the Secretary's Environmental Assessment Requirements (SEARs). A Certification Report is included in Appendix 3.

Key Issue 4 Built Form and Urban Design of the SEARs requires the preparation of a Visual Impact Assessment, specific requirements for which are included in requirements for Plans and Documents in the SEARs. The Visual Impact Assessment is to be prepared by Urbis, identifying potential impacts on the surrounding built environment and adjoining heritage items. This views analysis is an integral part of the Visual Impact Assessment and aims to identify the potential impacts of the proposal on public domain views.

Methods and Results

The RLA methodology is set out in Appendix 2 and includes a method flow chart and a detailed description of each part of the process that has been followed. It consists of three main components, beginning with the visual analysis and documentation of existing views and an analysis of baseline factors, an analysis of the extent of visual effects, followed by the third main component which is the assessment of visual impacts. This report is confined to the first component of the methodology.

It was found that the visual exposure of the proposed development is confined to a small visual catchment primarily in the immediate vicinity of the site. Perception of significant visual effects and change would be confined to close range views in the immediate visual catchment. Visual evidence of the changes proposed would be overall of minor exposure to the public domain, however the interface between the site and New South Head Road provides sensitive view locations, the effects on which will be assessed individually and in detail in the Visual Impact Assessment.

There would be low to medium visual exposure to most publicly accessible view locations other than some elevated close views from New South Head Road, that may be associated with higher levels of visual effects, generally characterised by a change in site levels and the visibility of new and approved buildings. View loss to the public domain would be likely to be minor.

Conclusions

The results were assessed against relevant legislation and the SEARs.

The overall visual exposure of proposal in the SSDA was found to be low and the proposed built form of low visibility and unlikely to cause significant change to the character of existing views.

1 Objectives of assessment

1.1 Objectives of this report

Richard Lamb and Associates (RLA) were commissioned by Carmichael Tompkins Property Group (CTPG) on behalf of Kambala School, to prepare an independent views assessment (VA) of public domain views of the proposed development.

This report supports a State Significant Development Application (SSDA) submitted to the Department of Planning, Infrastructure and Environment (DPIE) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act), for the proposed redevelopment of the sports precinct of Kambala School at 794 -796 New South Head Road, Rose Bay.

This application is SSD by way of clause 8 and schedule 1 under State Environmental Planning Policy (State and Regional Development) 2011 on the basis that the development is for the purpose of an existing school and has a Capital Investment Value of more than $20 million.

RLA are specialist consultants in visual impacts, views, view loss and landscape heritage. A CV for the principal and author of this report, Dr Richard Lamb is included at Appendix 6. A full and recently updated CV can be viewed or downloaded from the tab on the Home page of the RLA website at www.richardlamb.com.au.

1.2 Limitations

This report concerns the location, access to and characteristics of public domain views only. Visual issues also arise for other technical disciplines such as town planning, urban design, landscape design, architecture and heritage conservation. Technical reports from these disciplines may include consideration of visual issues and are addressed by others with appropriate expertise.

1.3 Secretary's Environmental Assessment Requirements

This report has been prepared having regard to the Secretary's Environmental Assessment Requirements (SEARs) issued for the project by DPIE, ref no SSD-10385 issued on 24 November 2019.

The SEARs included at Key issue 4, Built form and Urban Design, a requirement for a Visual Impact Assessment, as follows;

> ***Key Issue 4***
>
> *Provide a visual impact assessment that identifies any potential impacts on the surrounding built environment and landscape, including views to and from the site and any adjoining heritage items.*

1.4 Plans and documents

The SEARs, under Plans and Document that shall be submitted, require:

a view analysis, photomontages and architectural renders, including those from public vantage points.

Plans and documents required also include a:

Visual impact assessment, identifying potential impacts on the surrounding built environment and adjoining heritage items.

This VA addresses Key Issue 4 and the relevant plans and documents in relation to views from the surrounding built environment.

1.5 The site and surrounds

The subject site is located at Kambala School, Rose Bay and broadly includes the north and central parts of the existing campus. Kambala School is located above the north-eastern shore of Rose Bay and on the lower side slopes of land that slopes upward toward Vaucluse to the north and toward Dover Heights to the east. The existing sports precinct occupies low-lying land adjacent to and west of the existing New South Head Road entry to the School. part of the site of future sports precinct use is underlain by existing buildings.

2 Project description

2.1 Background

2.1.1 Need for a Campus Masterplan

Kambala is an independent day and boarding school for girls up to 18 years. Kambala also has an early learning centre catering for approximately 70 girls and boys aged between 6 months and 5 years. The school was established in the late 1800s and moved to the current campus in 1913. The campus has evolved in an organic and ad-hoc manner over the last 100 years as the school and its demands have grown.

A new campus-wide planning approach offers the opportunity to strategically plan for the future in a sustainable and effective manner and to preserve the unique aesthetic and heritage qualities of the campus. The preparation of a campus-wide planning approach is also consistent with the School's 2019 - 2023 Strategic Plan which identified the need for a broader strategic plan to coordinate renewal and development in a feasible and staged manner.

2.1.2 The Site

Kambala is located at 794 -796 New South Head Road, Rose Bay and is within the Woollahra Council local government area (LGA). Situated in the eastern suburbs of Sydney, the School is approximately 8km east of the Sydney CBD. The School is located on New South Head Road which is a classified road connecting the City with the eastern beaches. The School is surrounded by predominantly residential uses.

The campus is bound by New South Head (to the east), Bayview Hill Road (to the north) and Tivoli Avenue (to the west). Fernbank Boarding House is located at 1A -3 Bayview Hill Road opposite the Kambala School grounds. No works are proposed to this part of the campus in this DA. The locational context of the School is illustrated at **Figure 1**. **Figure 2** provides an aerial map of the School and its immediate surrounds.

The School campus slopes down from New South Head Road in the east to the west and comprises a series of existing buildings in the western part of the campus that range in height and age. The south western and north western part of the campus accommodates much of the school's existing built form, while the eastern part has the school's sporting fields and courts.

The Kambala School building known as Tivoli House is in the heart of the campus. The house, its interiors, gateposts, gates and flanking walls with railing facing Tivoli Avenue, as well as 2 Norfolk Island Pines are listed as a heritage item in Woollahra Local Environmental Plan 2014 (WLEP 2014).

Within the School campus, the site of this SSDA is illustrated in **Figure 3**. The site proposed for new buildings is on top of the existing sports field and music building, as shown in green. The site proposed for demolition works and associated façade redevelopment and landscaping works is shown in red and is limited to a portion of the existing Hawthorne Building and the Arts building. The site of new landscape works is shown in yellow and includes all external spaces connecting these works. It is anticipated that the construction works will be staged, so the construction site for any given stage will be smaller than the overall site identified in **Figure 3**. The four key main buildings proposed are identified in **Figure 4.**

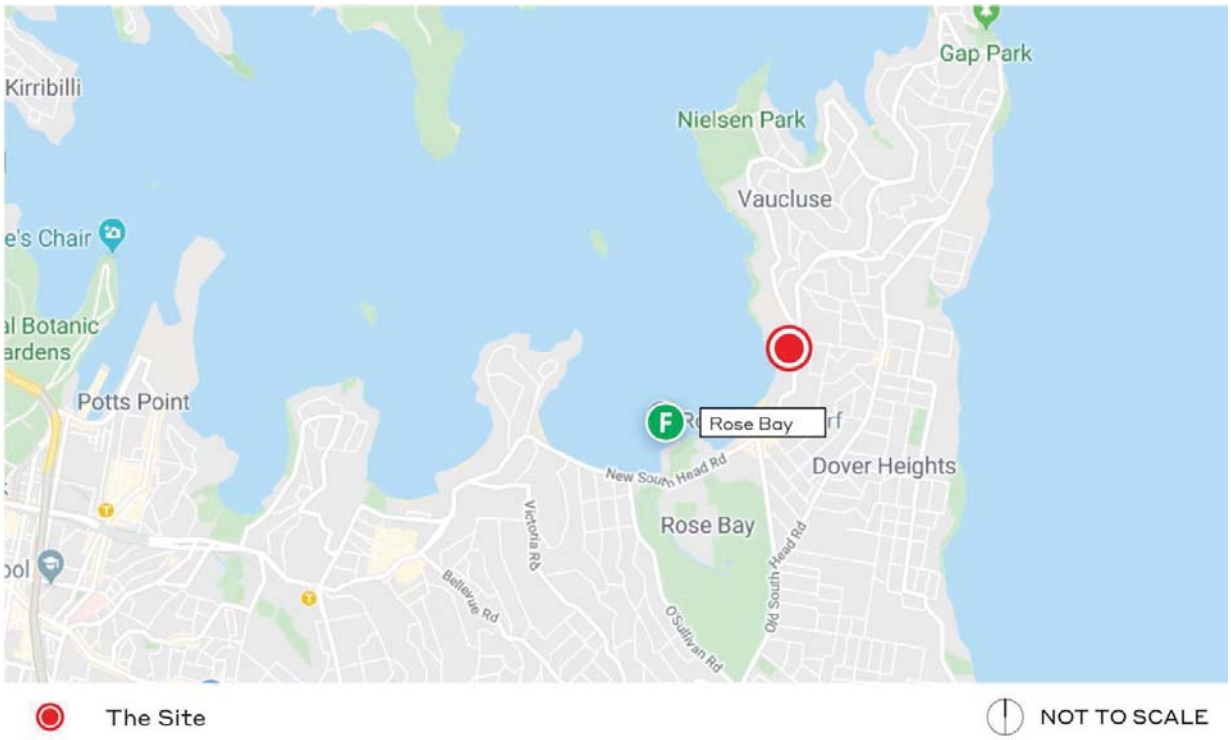


Figure 1 – Kambala School Location Context Plan
Source: Ethos Urban

Figure 2 – Aerial Map of the Kambala Campus
Source: Near Map

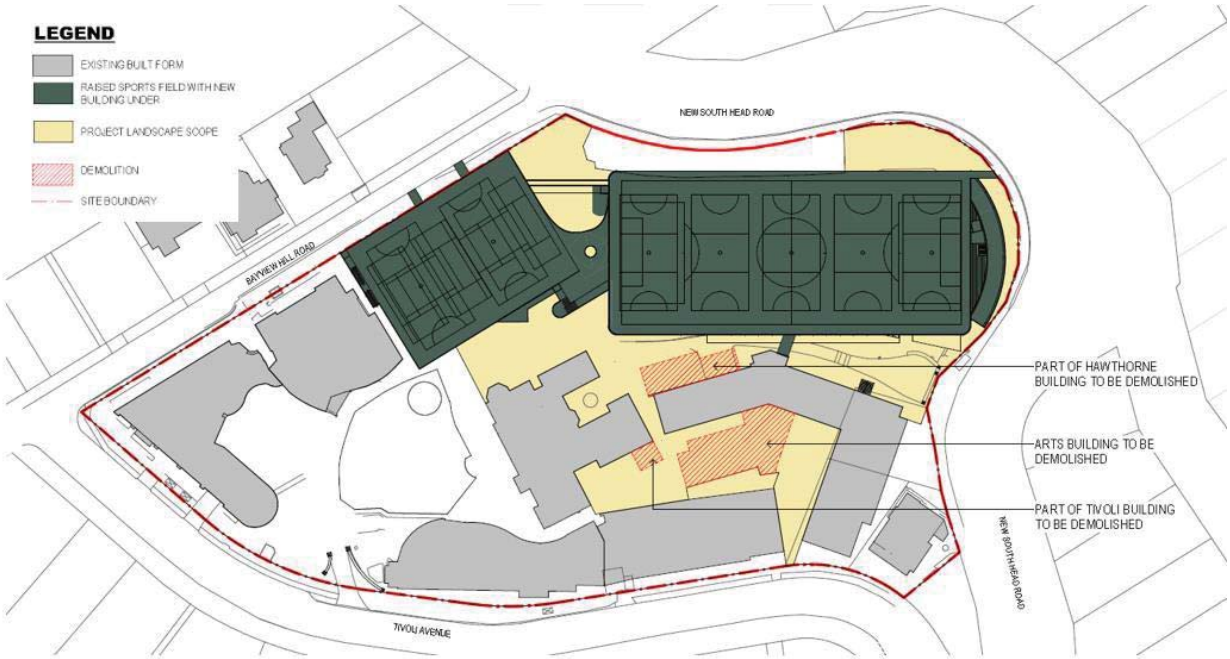


Figure 3 – Project Scope
Source: AJC

Figure 4 – Key Plan
Source: AJC

2.1.3 Legal Description and Ownership

The campus comprises several allotments, the legal descriptions of which are provided in **Table 1** below. The existing campus has a site area of approximately 22511m2.

Table 1 Legal Description

Address	Lot	Plan
794-796 New South Head Road	Lot 67	DP 2538
	Lot C	DP 210074
	Lot 1	DP 1089403
3 Tivoli Avenue	Null	SP 64653
3 Bayview Hill Road	Lot 1	DP 175832
1A Bayview Hill Road	Lot 45	DP 2538
1 Bayview Hill Road	Lot 46	DP 2538

2.2 Overview of Proposed Development

This SSDA includes detailed plans for a new sport, wellbeing and senior learning precinct. Accordingly, consent is sought for the following:

- The excavation of part of the existing sports field to facilitate the construction of the following:

– sports facilities including weights room and dance rooms;

– indoor multipurpose sports courts for use by up to 1500 people;

– innovative and flexible teaching and learning spaces;

– amenities, store rooms, plant, circulation and ancillary spaces

– reinstatement of the sports field surface on the roof (sports field and perimeter fencing)

– spectator seating / bleachers;

- The removal of the tennis courts (currently on the roof of the music building), and the construction of the following:

– a wellbeing centre, called the SHINE centre, to accommodate the Kambala SHINE program

– a new staff centre, called the KITE centre, to accommodate staff workstations, meeting areas, staff development workshop rooms and amenities

– reinstatement of the tennis courts, lighting and perimeter fencing on the new roof

- a new eastern forecourt for the school, new external landscaped areas and new courtyards;
- minor works to the existing music building to facilitate a new connection to the new courtyard;
- the partial demolition of the Hawthorne building and the construction of a new façade, roof and landscaping; and
- the demolition of the Arts building and the construction of new facades to adjacent affected buildings, and new landscaping to the footprint of the demolished building

3 View Analysis

The methodology for the view analysis in this report is in Appendix 2. It is accompanied by a flow chart that shows the logic, sequence and components for the documentation, analysis and assessment of visual impacts.

This section of the report is based on Section B2.1 of the methodology. Section B2.1 details the field assessment and documentation of viewing locations. The views analysis provides the baseline for assessing the cause and extent of visual effects prior to the assessment of visual impacts.

3.1 Visual catchment

3.1.1 Effective visual catchment of the project site

The potential visibility of the SSDA was determined by RLA using a combination of techniques. These included field observation of the site in close views and using existing or surrounding marker buildings or vegetation to identify the location of the subject site in more distant views. Marker buildings used included Tivoli House, Kincoppal School and buildings fronting Tivoli Avenue.

The site is confined on the east and north-east by the boundary with New South Head Road, to the north by Bayview Hill Road and to the west and south-west by part of Tivoli Avenue

There is steep, sloping partly retained land above the existing sports precinct on the east and north of the site, along parts of the boundaries along which run a section of New South Head Road and most of Bayview Hill Road. As a result of the significant cross-falls between these roads and the site, there are substantial existing views over the site. However, as the site is in most areas considerably below the view levels, existing playing fields and buildings on the School site generally are below to steeply below the view lines and either not significantly visible, or do not cause interruption of the extensive views south, over the reminder of the School and Rose Bay, or west, over Sydney Harbour.

The School occupies most of the land bounded by New South Head Road, Bayview Hill Road and Tivoli Avenue. A small number of individual residences exist north-east of Tivoli Avenue near the intersection with New South Head Road. The School owns several properties north of Bayview Hill Road between Nos.1 and 7. The original school building, Tivoli, is surrounded on all sides by later additions to the School and to the north and north-east by parts of the existing sports precinct. Views to the northern and eastern parts of Tivoli are available to the public domain over later buildings (for example from Tivoli Avenue and parts of New South Head Road, to the south and south-east respectively) and more substantially from higher parts of New South Head Road and Bayview Hill Road in the vicinity of the intersection of these with Towns Road. The most significant views of the building and its setting are internalised inside the School boundaries however it has local landmark significance.

rla
richard lamb & associates

NORTH
Not to Scale

Figure 5 Kambala School Sports Precinct Redevelopment

Photomontage view locations in immediate visual catchment
Extract from Google Earth Pro KMZ file

The development site has been significantly changed over time by the modification of the landform and the construction of buildings, including playing fields that partly occupy the roof levels of buildings below. The largest existing playing field for example, the eastern part of which is approximately on grade with the entry to the site from New South Head Road, is partly constructed above buildings on the lower, north-west part of the site. The existing main built forms on the site front a short section of New South Head Road south of the entrance from that road, or Tivoli Avenue and thereby block or screen views of the interior of the site for a significant part of the boundary with the public domain.

The boundaries of the school are therefore predominantly characterised by built form that masks or blocks views of the interior of the site in the existing situation. In addition, significant built form has been approved, but it yet to be constructed, which in many view lines from the public domain will increase the view blocking effect into the interior of the site.

By comparison, the north east part of the boundary of the site along a section of New South Head Road and the eastern part of Bayview Hill Road provides significant views, not only into the site, but also over the existing buildings on the site, in an arc extending from the south-west over Rose Bay and toward Bellevue Hill in the background, around to the west. This view includes extensive areas of Sydney Harbour between Rose Bay and the Sydney Harbour Bridge, with a backdrop of topography between Edgecliff and The Rocks. The view includes scenic, culturally significant and heritage items, icons and extensive areas of land-water interfaces.

The public domain views into the site are typically without significant vegetation, however a discontinuous canopy of vegetation occurs along the eastern side of the site adjacent to New South Head Road, which partly screens the views inward. Low vegetation partly screens the views from the vicinity of the intersection of New South Head Road, Bayview Hill Road and Towns Road at the north-east corner of the site.

Beyond the site on all sides, the landscape is characterised by residential development, predominantly of detached residences, interspersed with residential flat buildings of various ages, ranging from interwar to contemporary. The visual exposure of the site to private domain views will considered in the Visual Impact Assessment to be prepared by Urbis. As a result of the cross-falls between the site and the surrounding environment, as well as the screening or blocking effects of existing and approved buildings, the exposure of the site to external residential views is largely confined to the north-east relative to the site, to elevated residences to the east of New South Head Road and in the vicinity of its intersection with Towns Road.

On the basis of the determination of the visual catchment of the site, RLA identified a series of representative view positions (VPs), which represent the range of visual exposures of the site to the public domain. Photographic images were captured from the VPs and geotagged. The metadata on the images were used to prepare a Google Earth KMZ image generated by Geosetter software, which shows the locations of the VPs and the file names of the corresponding images. A screen image of part of the KMZ file is shown in Figure 5.

The viewing locations identified included views on the axis of a public domain view specifically identified in the Woollahra DCP 2015 for the Rose Bay Precinct (B1.9, Map 9 at Page 26). While the origin of the view is in Towns Road and there is no view from the place shown on Map 9, that is at some distance from the site, if the axis is produced it would continue across New South Head Road and down the axis of Bayview Hill Road. As a result, several view points were assessed in that vicinity, to ensure that this vista was adequately considered.

On the same map is another site from which several arrows emanate, indicating a significant view location, on the west side of New South Head Road slightly south of the intersection of New South Head Road and Bayview Hill Road. Careful attention was paid to ensuring that this view point was also included.

The south boundary of the Vaucluse West precinct, B1.10, Map 10 Page 29 of the DCP is also on Bayview Hill Road and although the Towns Road vista is not marked on that map, the same vista would logically also be relevant to the Vaucluse West precinct.

As noted above, the visual catchment is constrained by existing development and topography and is effectively confined to the periphery of the school and a small part of the public domain to the north-east of the site. The view positions on Map 1 give a good indication of how confined the visual catchment is.

The view positions that were determined as representative of the visual catchment were ranked in terms of priority for the preparation of photorealistic photomontages as Priority 1 (photomontages to be prepared) or Priority 2 (views from the position to be analysed, but where visual exposure would either be minor or and little of the change proposed in the proposal would be able to be seen, or would be similar to other locations that had been modelled in photomontages).

Photomontages were prepared for all Priority 1 locations. Photographic plates from Priority 1 and 2 locations are shown in Appendix 1.

3.1.2 Visual exposure of the proposal

As a result of the combination of topography, existing development and visibility from the visual catchment, the proposed development would vary in visual exposure to each of the locations identified for preparation of photomontages showing views from the public domain.

Table 1 below shows the RLA VP number, a description of the location of the VP and a rating of the visual exposure of the proposed development to each VP.

Table B2.2 Summary of Visual Exposure (Priority 1 views)

RLA image and photomontage location	Location Description	Visual Exposure of the proposed development	Rating of the Visual Exposure as Low, Medium or High
V4	Informal lookout site on the west side of New South Head Road north of the intersection with Bayview Hill Road	The proposed development would be below the predominant view line Existing approved and proposed development would be of low visibility	Low
V5	Site on the footpath at the south-west side of the intersection of New South Head Road and Bayview Hill Road	The proposed development would be below the predominant view line Existing approved and proposed development would be of medium visibility	Medium
V6	Site on the western side footpath of New South Head Road south of the intersection with Bayview Hill Road	The proposed development would be below the predominant view line Existing approved and proposed development would be of high visibility	High
V7	Site at the intersection of Towns Road and New South Head Road, at the head of stairs linking the elevated part of Towns Road with the footpath on New South Head Road	The proposed development would be below the predominant view line Existing approved and proposed development would be of low visibility	Low
V9	Site on the footpath on the western side footpath of New South Head Road north of the main School entrance gates on New South Head Road	The proposed development would be partly below the predominant view line Existing approved and proposed development would be of high visibility	High
V10	Site on the footpath on the western side of New South Head Road at the entry gates to the School	The proposed development would be level with or above the predominant view line The proposed development would be of high visibility	High
V11	Site on the western side footpath of New South Head Road south of the intersection with Tivoli Avenue	The proposed development would be level with or slightly above the predominant view line The proposed development would be of low visibility	Low
V13	Site on the western side footpath of New South Head Road south on the south side of the intersection with Tivoli Avenue	The proposed development would be level with or slightly above the predominant view line The proposed development would be of low visibility	Low

Table B2.2 Summary of Visual Exposure (Priority 1 views)

RLA image and photomontage location	Location Description	Visual Exposure of the proposed development	Rating of the Visual Exposure as Low, Medium or High
V15	Site on the western side footpath of New South Head Road south of the intersection with Bayview Hill Road	The proposed development would be below the predominant view line Existing approved and proposed development would be of high visibility	High
V16	Site on the north side footpath in Bayview Hill Road close to and west of the intersection with New South Head Road	The proposed development would be below the predominant view line Existing approved and proposed development would be of high visibility	High
V17	Site on the west side of Tivoli Avenue adjacent to the south main pedestrian entry to the School	The proposed development would be above the predominant view line Existing approved and proposed development would be of low visibility	Low
V18	Site on the foreshore of Lyne Park east of Rose Bay Wharf	The proposed development would be above the predominant view line Existing approved and proposed development would be of low visibility	Low

The School is characterised by existing built forms that are predominantly massed along the south-west parts of the site. The proposed development is situated in the north and north-east part of the site and would generally be of low visual exposure other than to part of New South Head Road and Bayview Hill Drive in the public domain.

While the proposal is to raise the existing levels of the site to provide for a sports precinct that is elevated compared to the existing situation, which considered in relation to existing approved development that is yet to be constructed, the proposed development in this application would largely be below existing view lines, hidden by existing development or have only minor effects on access to existing future views over and beyond the development site. Approved but yet to be constructed development is also relevant in this regard. Future approved development would be likely, based on the evidence provided by the photomontages, to cause greater change to the composition of views than the development proposed in this SSDA in some cases.

3.1.3 Analysis of photomontages

An analysis of the likely effects of the visual exposure of the proposal on access to existing views follows.

VP 4

VP4 is an informal but well-used lookout place adjacent to the intersections of New South Head Road, Towns Road and Bayview Hill Road. The same view place also provides panoramic Harbour views to the west that would be unaffected by the proposed development. The location of the VP is approximately on the alignment of the Towns Road vista shown in the Woollahra DCP for the Rose Bay precinct.

One area of proposed playing field elevated above its existing level would be partly visible from VP4, as would safety fences and their supports. There would be no significant change to the access to views beyond the School site. The proposed development would block the view of part of Tivoli House and a school building on Tivoli Avenue. A further part of Tivoli House would be blocked by view of an approved but yet to be constructed building.

VP5

VP5 at the intersection of New South Head Road and Bayview Hill Road, provides a limited view of School buildings on Tivoli Avenue, existing sports areas and Tivoli House, as well as a view over Rose Bay and Point Piper. The same view place also provides panoramic Harbour views to the west that would be unaffected by the proposed development.

Similarly to VP4, one area of proposed playing field elevated above its existing level would be partly visible, as would safety fences and their supports. There would be no significant change to the access to views beyond the School site. The lower part of Tivoli House in this view would be blocked by an approved but yet to be constructed building.

VP6

VP6 provides one of the most direct views of the development site, from the footpath of New South Head Road. Two areas of playing field elevated above the existing levels would be visible in the foreground. The proposed development would block the view of part of Tivoli House. An existing approved but yet to be constructed building would block view of a further part of Tivoli House and some water view in Rose bay.

VP7

The photomontage for VP7 indicates the extent to which the site is isolated from the adjacent public domain by topography and the steep cross-falls between New South Head Road and the site. The view is taken from an elevated level at the intersection with Towns Road. The proposed development would be of low visual exposure and would have no significant effect on access to views beyond the site.

VP9

VP9, similarly to VP6, provides a direct view of part of the development site, from the footpath of New South Head Road. The vegetation that is partly screening the view is partly proposed to be removed, leading to higher visual exposure in the application. An areas of playing field elevated above the existing levels would be visible in the foreground. The proposed development would partly block views of buildings south of the existing access from the New South Head Road gate to the School. The proposal would not significantly alter views beyond the site toward the CBD.

VP10

The current view across on-grade playing field from this view point, toward retained land below New South Head Road would be replaced by a foreground of new building. There would be a minor change to the access to views beyond the School site.

VP11

The proposed development would be of minimal visibility and would cause no significant change to access to views of the heritage items Tivoli House and Kincoppal School.

VP13

The proposed development would be of minimal visibility and would cause no significant change to access to views of the heritage items Tivoli House and Kincoppal School.

VP15

VP15 provides the most expansive and direct view of the development site, from the footpath of New South Head Road. Two areas of playing field elevated above the existing levels would be visible in the foreground. The proposed development would block the view of buildings south of the existing access from the New South Head Road gate to the School and partly block a view of Tivoli House. An existing approved but yet to be constructed building would block view Sydney Harbour waters in the general direction of the Sydney Harbour Bridge.

VP16

VP16 provides a view that is similar in composition to the view from VP6. It provdes a direct view of part of the development site, from the footpath of New South Head Road. An area of playing field elevated above the existing levels would be visible in the foreground. The proposed development would partly block a view of Tivoli House. An existing approved but yet to be constructed building would block the view of Tivoli House more substantially. The proposal would not significantly alter views beyond the School site.

VP17

The proposed development would be of minimal visibility from this access to the School site and make no significant change to views beyond the site.

VP18

The proposed development would be of low visibility and would cause no significant change to access to views.

3.2 Variable visual effects factors

(See B2.2.2, Methodology, in Appendix 1)

Summary in relation to view composition

The analysis of public domain photomontages above shows that there would be minor changes to view composition overall, as a result of construction of proposed and approved development in the School site. While there would be substantial change to the appearance of the site in some views from elevated positions on New South Head Road, the main effect would be elevation of existing sports facilities to higher levels than at present. Views beyond the site would not be significantly changed in composition. Future approved development when constructed would have greater effects on the access to views of both Tivoli House and to items beyond the site than the proposed development.

6 Conclusions

This section summarises the conclusions of the Views Analysis in this report.

The project will have minor or moderate visibility to a confined visual catchment in the public domain that is primarily to the north and east of the site.

Representative photomontages have been prepared that comply with the Land and Environment Court of NSW practice policy for use of photomontages in evidence. This is the industry standard for best practice and the photomontages are certified as being accurate and can be relied on.

There would overall be minor changes to the composition of only some views and no effect on others. Views to scenic and other items beyond the site would generally be unaffected. Future approved but as yet unconstructed development would have more effect on view composition than the proposal in some cases.

Notwithstanding the proposed built form is taller relative to the existing massing on the subject site, its form and character are similar to the existing views across the site and unlikely to significantly decrease view access from the public domain.

Dr Richard Lamb

Richard Lamb and Associates

Appendix 1 Photographic plates

Plate 1;
VP3 Tivoli Avenue
Priority 2 view not recommended for photomontage preparation

Plate 2;
VP3 contextual view of existing development in Tivoli Avenue

Plate 3;
VP4 lookout site off New South Head Road north of intersection of Bayview Hill Road
View used for photomontage

Plate 4;
VP4 showing example of marking of view location for surveyors's use

Plate 5;
VP4 showing likely focus of scenic views from the same location

Plate 6;
VP5 New South Head Road at intersection with Bayview Hill Road
View point used for photomontage

Plate 7;
VP6 New South Head Road showing part of the view available at 35mm focal length field of view

Plate 8;
VP6 New South Head Road showing further aspects of the view available at 35mm focal length field of view
View point used for photomontage

Plate 9;
VP6 New South Head Road, 14mm focal length wide-angle view to indicate the expanse of view available
These wide angle views are not used for photomontages but are indicative only

Plate 10;
VP7 New South Head Road at the intersection with Towns Road, on steps adjacent to bus stop
View point used for photomontage

Plate 11;
VP9 New South Head Road
View point used for photomontage

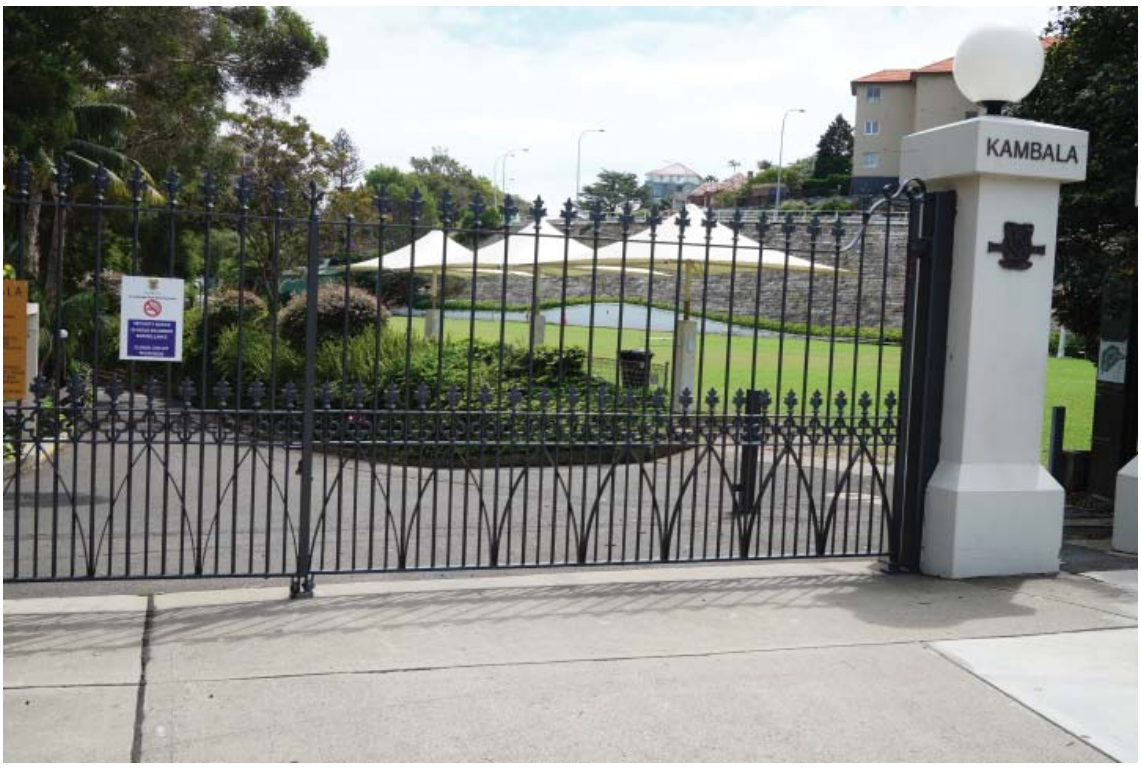


Plate 12;
VP10 New South Head Road at main gate to School site
View point used for photomontage

Plate 13;
VP11 New South Head Road south of the intersection with Tivoli Avenue
View point used for photomontage

Plate 14;
VP13 New South Head Road at the intersection with Tivoli Avenue
View point used for photomontage

Plate15;
VP15 New South Head Road
View point used for photomontage

Plate 16;
VP 15 New South Head Road
Indicative image taken with 14mm wide angle lens

Plate 17;
VP17 Tivoli Avenue showing view through main gate
View point used for photomontage

Plate 18;
VP 18 Lyne Park east of Catalina restaurant and Rose Bay Ferry Wharf
View point used for photomontage

Plate 19;
Detail of 1 Bayview Hill Road north of site, a school owned property

Plate 20;
Detail of 3 Bayview Hill Road north of site, a school owned property

Appendix 2

Assessment Methodology

B.1 Introduction

The assessment of visual impacts is a field that requires a degree of subjective judgement and cannot be made fully objective. It is therefore necessary to limit the subjectivity of the work by adopting a systematic, explicit and comprehensive approach. This has the aim of separating aspects that can be more objective, for example the physical setting, visual character, visibility and visual qualities of a proposal, from more subjective elements, such as visual absorption capacity and the compatibility of the proposal with the setting.

The methodology used in the present assessment has been developed over several years by RLA and adopts relevant aspects of methods accepted in landscape assessment, extended and modified to adapt to urban and maritime environments. The modifications introduced are also informed by visual perception research that has been carried out by myself and others in both natural and urban contexts.

The flow chart at Figure B1 indicates the relationships among the parts of the visual impact assessment methodology. This report concerns only the view analysis component of the methodology that is indicated by a blue boundary on the first part of the flow chart. The Visual Impact Assessment, for with the VA is a precursor, will be undertaken by Urbis, using its own appropriate methodology.

B.2 Components of the Methodology

Overall, the major components of the visual impact assessment are determining the concept for the development, and general strategic planning principles, view analysis, visual effects analysis, visual impact evaluation and assessment of significance of residual visual impacts. The assessment is also supplemented with an assessment of the merits and compliance of the proposed redevelopment with the relevant policies in relation to visual and related amenity and heritage impacts and any mitigation measures that have been undertaken or could be proposed to reduce or eliminate residual impacts, if necessary.

As noted above, this report concerns the views analysis component of the methodology only.

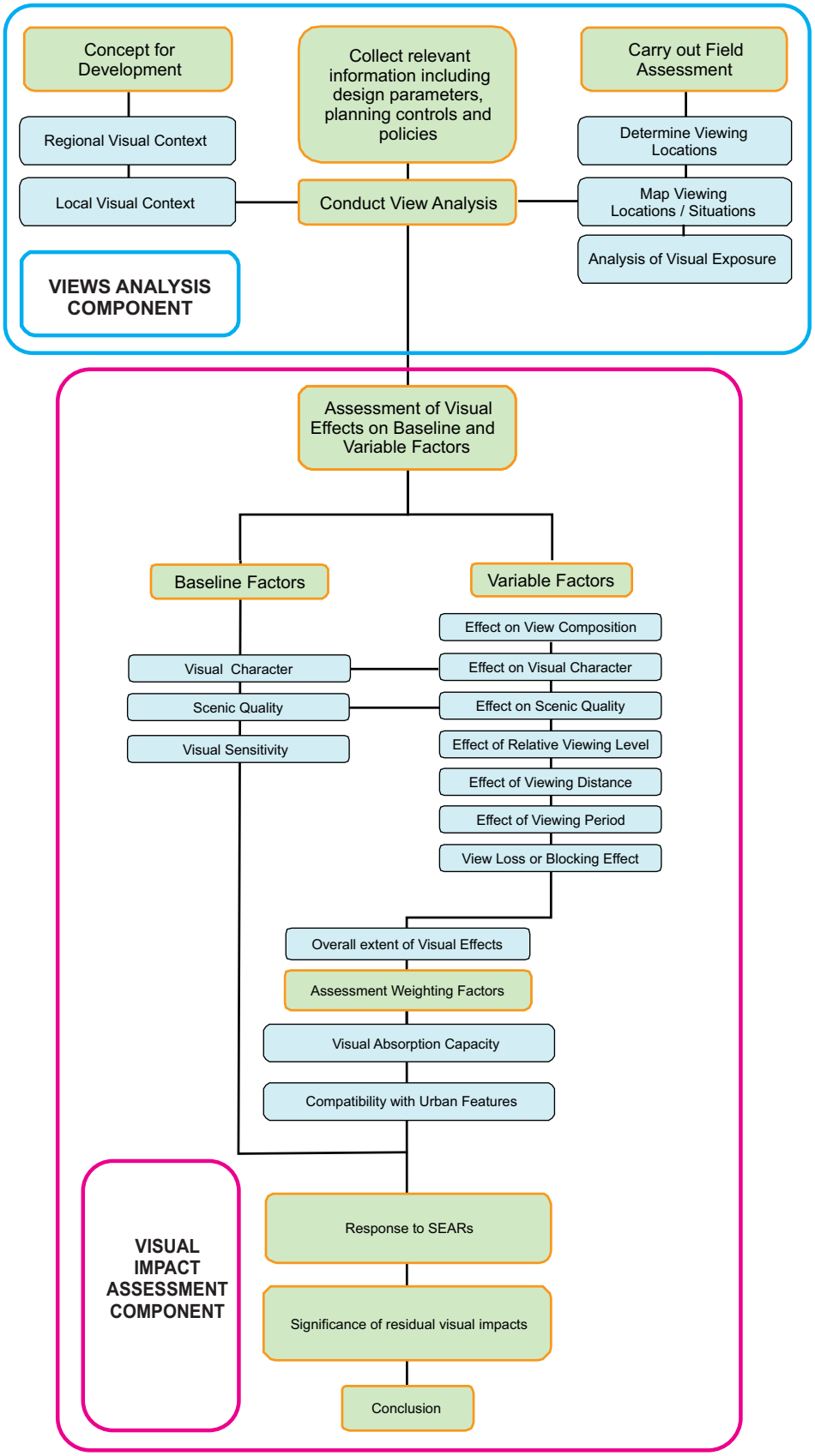
B.2.1 The Components of the View Analysis

The development proposed and detailed field assessment

This includes a thorough understanding of the proposed development including its location, scale and extent to understand the scale and spatial arrangement of the development. The next step is to carry out a detailed field assessment by identifying the potential viewing locations, visiting the representative locations, documenting the proposal's approximate location on a base map,

photographing representative locations and rating overall assessment of the visual effects and relative visual impacts factors. Photographs taken from the representative view locations in the public domain were used for the purpose of preparing photomontages to be used for the analysis of the visual exposure of the proposed development. The photomontages were prepared by Arterra Interactive and have been certified as accurate in Appendix 3. The photomontages are in Appendix 4.

Figure B1: *RLA Development Assessment Method Flow Chart*



Identifying and mapping viewing locations and situations

The representative viewing locations sample visited during the field assessment are mapped including the ones for which analytical photomontages have been prepared to represent the general arrangement of the proposed development (see photomontages, Appendix 4).

Identification of the visual catchment

The potential total visual catchment means the physical area within which the proposal would be visible and identifiable if there were no other constraints on that visibility, such as intervening vegetation and buildings. The catchment on the water cannot be delineated by a finite boundary because there is no identifiable physical feature that can define it. As is the case for views from the distant foreshore or land, the potential total visual catchment is larger than the area within which there could be visual effects of the proposal. This is because with increasing distance, perspective effects and intervening elements such as topography, buildings and vegetation, a viewer's ability to discern and potentially be affected by the proposal would decrease to zero before the theoretical extent of the potential total visual catchment is reached.

Within the potential total visual catchment, the visibility of the proposal would therefore vary. We identify the area within which the proposal would be identifiable and where it could cause visual impacts by assessing visibility.

Visibility means the extent to which the proposal would be physically visible to the extent that it could be identified, for example as a new, novel, contrasting or alternatively a recognisable but compatible feature. Features such as vegetation, buildings and intervening topography can affect the degree of visibility.

Appendix 3

Certification of photomontages

Principles of verification of photomontages

For the certification of photomontages, the fundamental requirement is that there is a 3D computer model of the proposed development that can be accurately located and merged with representative photographs taken from key viewing places to produce a photomontage.

The key to being able to certify the accuracy of the photomontage resulting from merging the 3D model and photographs is being able to demonstrate that the 3D model of the proposed building has a good fit to known surveyed markers on the existing buildings and on fixed features of the site or locality which are shown on the survey plan. The second level of fit is the fit of the model to a realistic photographic representation of the site in its context.

Allen Jack + Cottier prepared the 3D model of the proposed development using the software Vector Works and survey information for the site provided by RPS Group registered surveyors (RPS). The model was supplied to Arterra Interactive, expert architectural illustrators, where the location and height of the 3D model of the proposal was verified with respect to surveyed features of the existing development site and features in the surrounding environment.

Photographs for the purposes of preparing photomontages were taken by RLA using a professional quality 35mm format mirrorless full-frame camera, Sony ILCE-7RM3 v2.0. The locations for the photographs were marked by RLA and geotagged photographs of the view points and a KMZ file of the aerial image and view point locations were provided to RPS. The locations and RLs of the lens of the camera for photographs used to prepare photomontages were established by survey by RPS, consistent with the requirements of the practice note for use of photomontages in evidence by the Land and Environment Court of New South Wales. An excerpt from the survey showing the the camera locations and RLs, prepared by RPS, is included in Appendix 2.

The 3D models were then merged with digital photographic images of the existing environment by Digital Line. As per the SEARs requirements the photomontages show the proposed built form. Photographic plates of the existing view and a photomontage from each view position inspected (VPs 1-12) are included in Appendix 4.

Focal length of lens for photographs

The camera images for the photomontages need to be of sufficient resolution taken with a lens of low distortion. Single frame photographs should be taken, using a known and standardised focal length of the lens that is appropriate for the purpose, so that every photograph used has the same horizontal field of view.

The reasons for using a specific focal length is determined by the vertical and horizontal scale of the subject of the view as well as the need to minimise apparent distortion of the images. The subject of the views commonly contains elements of very different horizontal and vertical scale, all of which must ideally be visible in each photograph.

It is a common problem in architectural photography that in close views a building cannot be encompassed in a single image, for the reasons above. That is, the subject of the view is too large or too close to be captured in a single image. It is critical however, in preparing 3D images, for example for use in photomontages, that the subject can be captured in a single image. This is because a composite image, such as one 'stitched together' electronically out of separate images which can encompass the whole field of view (for example a panorama), has un-reconcilable distortions in it.

As a practical matter, it is not possible to represent the composition of the views from close range without using a wider angle lens. The horizontal and vertical scale relationships are such that a 'normal' lens could not capture the appropriate context.

Photographs for this project were taken with a Sony ILCE-7RM3 v2.0 full frame camera using a 35mm focal length lens. It is conventional to use a 'normal' lens to take landscape photographs, for example a 50mm lens on a full-frame 35mm format film camera, as when reproduced in large format (eg. A3 size prints), the objects in the image appear of 'normal' scale. However, in photographing streetscapes and individual buildings, particularly when the site and proposed building occupy more than double the field of view, such as views form New South Head Road and Bayview Hill Road, that convention cannot be practically. The Land and Environment Court of New South Wales practice note does not require a specific focal length to be used, but requires that the characteristics of the camera, focal length of the lens and field of view of the lens are specified. In this case, a lens focal length of 35mm was adopted for all views by aligning to the focal length registration mark on the 24-70mm lens used. Minor discrepancies occur between images because it is not possible to manually produce an exact focal length with the variable lens. The differences do not make any significant change to the field of view and have been taken into account by Arterra Interactive in aligning the 3D model of the proposed buildings with the photographs.

Preparation of Photomontages

The accuracy of the locations of the 3D model of the proposed development with respect to the photographic images was checked in multiple ways:

1. The model was checked for alignment and height with respect to the 3D survey and adjacent surveyed reference markers which are visible in the images taken by RLA.
2. The location of the camera in relation to the model was established using the survey model and the survey locations, including map locations and RLs. Focal lengths and camera bearings in the meta data of the electronic files of the photographs were reviewed by RLA.
3. Reference points from the survey were used for cross-checking accuracy in a sample of images.
4. No significant discrepancies were found between the known camera locations and those predicted by the computer software of the Camera Match utility. There is a high level of fit of the 'wire frame' models of the survey with the photographs, as can be seen in the photomontages in Appendix 4.

Checking the montage accuracy

The purpose of the detailed surveying/modelling, and precisely recorded photography is to enable a 3D version of the actual physical site to be created in CAD software. If this has been done accurately, it is then possible to insert the selected photo into the background of the 3D view, position the 3D camera in the surveyed position and then rotate the camera around until the surveyed 3D points match up with the correlating real world objects visible in the photo. This is a self-checking mechanism – if the camera position or the survey data is out by even a small distance then good fit becomes impossible.

It is however important to note that it is not possible for a 100% perfect fit to occur for the following reasons:

- Variance between measured focal length compared to stated focal length,
- Minor lens distortion which varies from lens to lens and manufacturer to manufacturer,

Allowing for these limitations, Arterra Interactive achieved a very high accuracy of alignment of the survey and proposed development models, as evident in the photomontages.

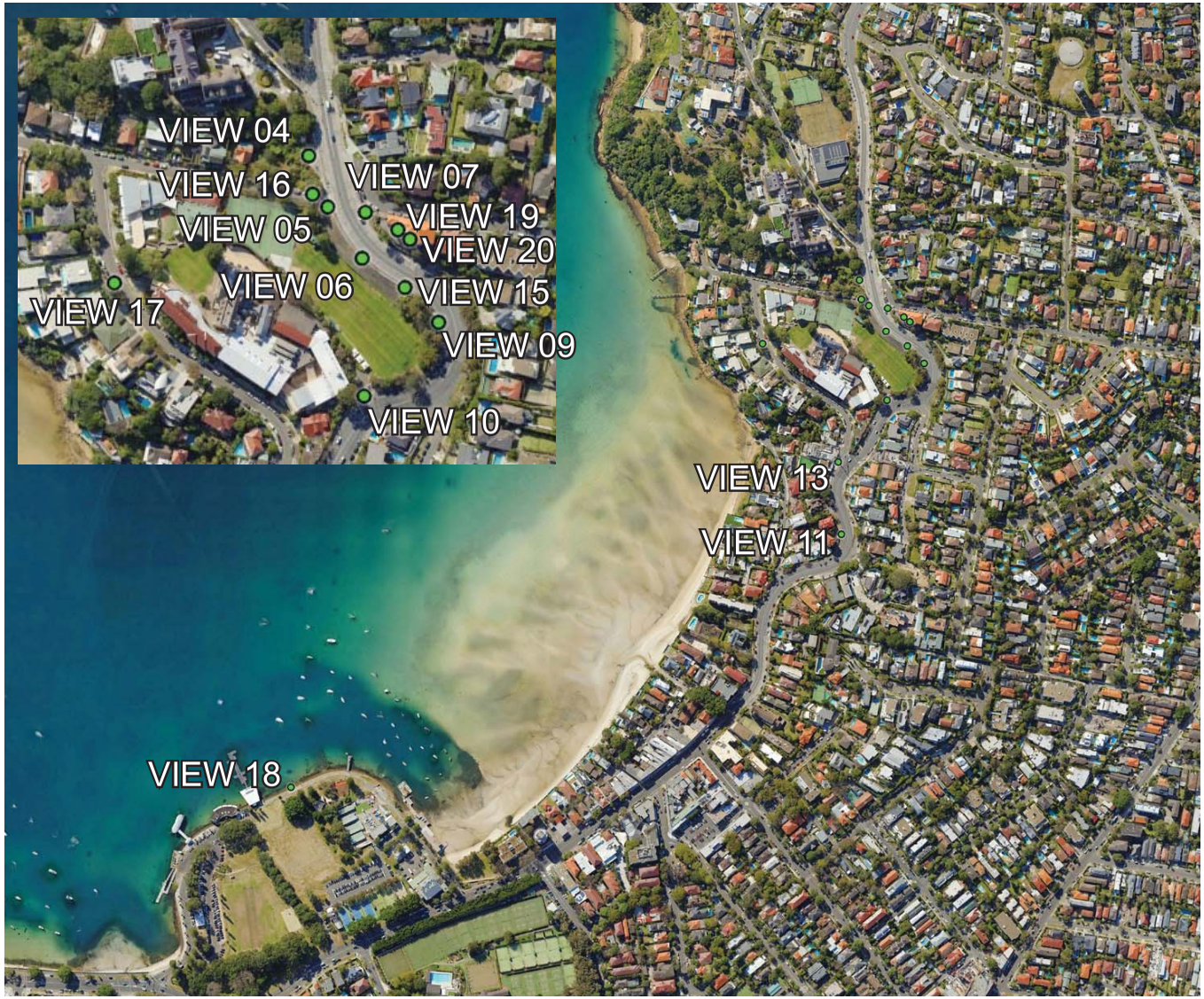
Certification

The above requirements were met and RLA can certify, based on the methods used and taking all relevant information into account, that the photomontages comply with the SEARs to the extent that it reasonably possible in the circumstances. Arterra Interactive have used survey information to locate the 3D model in each view. In our opinion the wire-frame diagrams demonstrates that the 3D model has been accurately aligned and fits into the existing context and photographs.

In this regard the photomontages are as accurate as is reasonably possible in the circumstances and they comply with the Land and Environment Court of New South Wales practice policy concerning the use of photomontages in the Court. This has become recognised as industry standard and best practice for preparation of photomontages.

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - KEY PLAN



04
VIEW 04 - New South Head Road

05
VIEW 05 - New South Head Road

06
VIEW 06 - New South Head Road

07
VIEW 07 - New South Head Road

09
VIEW 09 - New South Head Road

10
VIEW 10 - New South Head Road

11
VIEW 11 - New South Head Road

13
VIEW 13 - New South Head Road

15
VIEW 15 - New South Head Road

16
VIEW 16 - New South Head Road

17
VIEW 17 - Tivoli Avenue

18
VIEW 18 - Lyne Park

19
VIEW 19 - 50 Towns Road Unit 01

20
VIEW 20 - 50 Towns Road Unit 08

KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 04 - NEW SOUTH HEAD ROAD

SURVEY OVERLAY

FOCAL LENGTH: 35MM

INFORMATION

VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW | PROPOSED SSD DA - GREY

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 04

KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 05 - BAYVIEW HILL ROAD

SURVEY OVERLAY

FOCAL LENGTH: 35MM

INFORMATION

VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW | PROPOSED SSD DA - GREY

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 05

KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 06 - NEW SOUTH HEAD ROAD

SURVEY OVERLAY

FOCAL LENGTH: 34MM

INFORMATION

VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW | PROPOSED SSD DA - GREY

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 06

KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 07 - NEW SOUTH HEAD ROAD

SURVEY OVERLAY

FOCAL LENGTH: 35MM

INFORMATION

VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW | PROPOSED SSD DA - GREY

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 07

KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 09 - NEW SOUTH HEAD ROAD

SURVEY OVERLAY

FOCAL LENGTH: 34MM

INFORMATION

VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW (NOT VISIBLE) | PROPOSED SSD DA - GREY

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 09

KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 10 - 794 NEW SOUTH HEAD ROAD

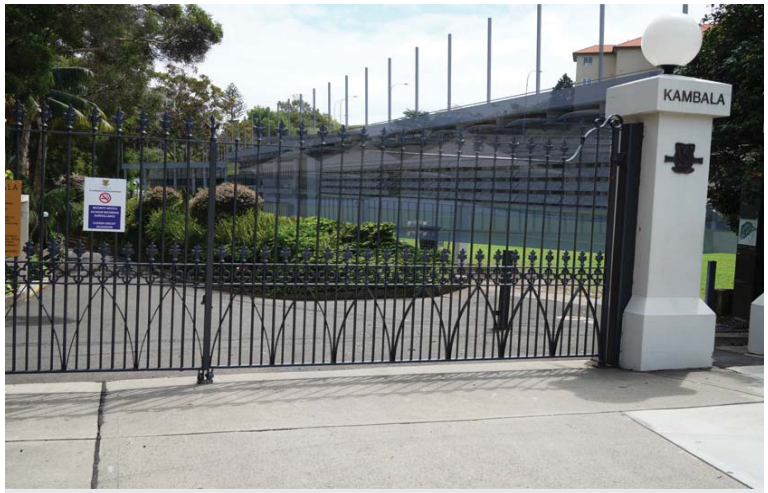
SURVEY OVERLAY

FOCAL LENGTH: 34MM

INFORMATION

VIEW LOCATION

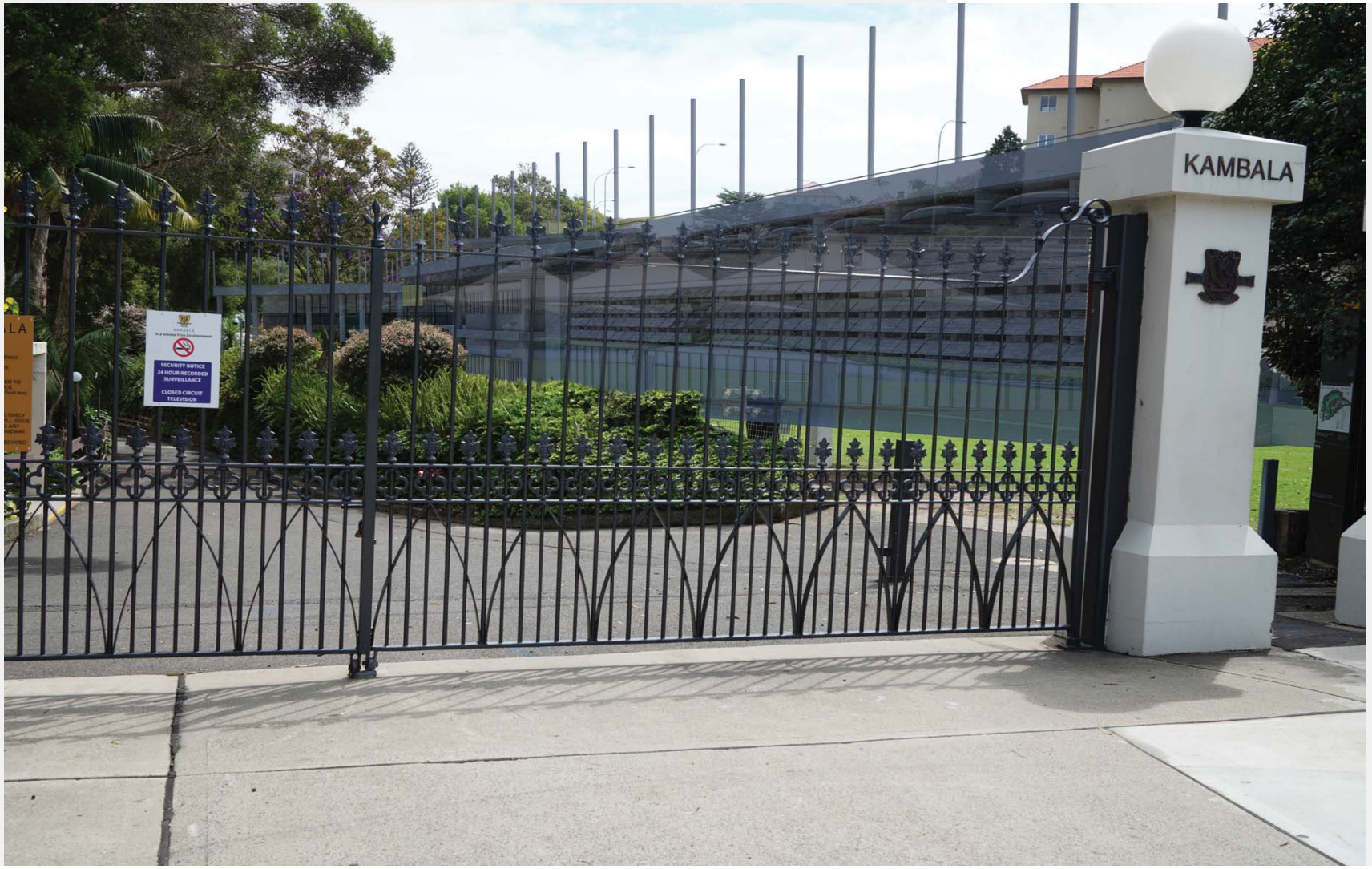
EXISTING CONDITIONS



EXISTING APPROVED DA - YELLOW | PROPOSED SSD DA - GREY

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 10



KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 11 - 778 NEW SOUTH HEAD ROAD

SURVEY OVERLAY

FOCAL LENGTH: 41MM

INFORMATION

VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW (NOT VISIBLE) | PROPOSED SSD DA - GREY (NOT VISIBLE)

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 11

KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 13 - 2 TIVOLI AVENUE

SURVEY OVERLAY

FOCAL LENGTH: 33MM

INFORMATION

VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW (NOT VISIBLE) | PROPOSED SSD DA - GREY (NOT VISIBLE)

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 13

KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 15 - NEW SOUTH HEAD ROAD

SURVEY OVERLAY

FOCAL LENGTH: 34MM

INFORMATION

VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW | PROPOSED SSD DA - GREY

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 15

KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 16 - BAYVIEW HILL ROAD

SURVEY OVERLAY

FOCAL LENGTH: 35MM

INFORMATION

VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW | PROPOSED SSD DA - GREY

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 16

KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 17 - TIVOLI AVENUE

SURVEY OVERLAY

FOCAL LENGTH: 34MM

INFORMATION

VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW | PROPOSED SSD DA - GREY

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 17

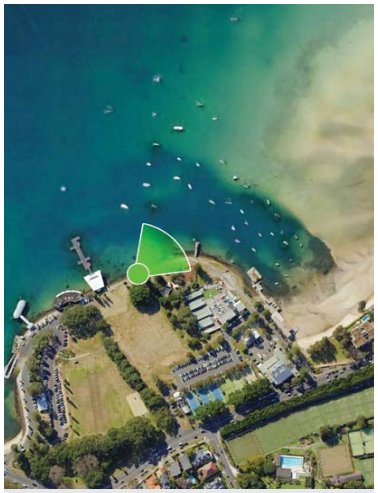
KAMBALA SCHOOL, ROSE BAY 2029

LOCATION 18 - LYNE PARK

SURVEY OVERLAY

FOCAL LENGTH: 35MM

INFORMATION



VIEW LOCATION

EXISTING CONDITIONS

EXISTING APPROVED DA - YELLOW (NOT VISIBLE) | PROPOSED SSD DA - GREY (NOT VISIBLE)

KAMBALA SCHOOL, ROSE BAY 2029

ACCURATE PHOTOMONTAGES - VIEW 18

PR145951 - Kambala School, RLA Location of Images Marker

Marker	MGA 56 2020		AHD	NOTES
	Easting	Northing		
RLA06380 V3	340029.80	6251522.24	25.94	
RLA06368 V4	340173.52	6251578.57	51.84	
RLA06365 V5	340185.71	6251545.37	50.35	
RLA06361 V6	340209.14	6251511.31	48.98	
RLA06373 V7	340211.90	6251541.97	51.32	
RLA06352 V9	340260.59	6251469.46	45.89	
RLA06346 V10	340212.25	6251419.27	39.37	
RLA06340 V11	340153.93	6251238.12	26.71	
RLA06343 V13	340148.61	6251335.43	31.29	
RLA06357 V15	340237.83	6251491.97	47.47	
RLA06375 V16	340175.17	6251554.89	48.01	
RLA06383 V17	340043.38	6251491.28	27.98	

Summary Curriculum Vitae: Dr Richard Lamb

Summary

- Qualifications
  - Bachelor of Science - First Class Honours, University of New England in 1969
  - Doctor of Philosophy, University of New England in 1975

- Employment history
  - Tutor and teaching fellow – University of New England School of Botany 1969-1974
  - Lecturer, Ecology and environmental biology, School of Life Sciences, NSW Institute of Technology (UTS) 1975-1979
  - Senior lecturer in Landscape Architecture, Architecture and Heritage Conservation in the Faculty of Architecture, Design and Planning at the University of Sydney 1980-2009
  - Director of Master of Heritage Conservation Program, University of Sydney, 1998-2006
  - Principal and Director, Richard Lamb and Associates,1989-2019

- Teaching and research experience
  - visual perception and cognition
  - aesthetic assessment and landscape assessment
  - interpretation of heritage items and places
  - cultural transformations of environments
  - conservation methods and practices

- Academic supervision
  - Undergraduate honours, dissertations and research reports
  - Master and PhD candidates: heritage conservation and environment/behaviour studies

- Professional capability
  - Consultant specialising in visual and heritage impacts assessment
  - 30 year's experinence in teaching and research on environmental assessment and visual impact assessment.
  - Provides professional services, expert advice and landscape and aesthetic assessments in many different contexts
  - Specialist in documentation and analysis of view loss and view sharing
  - Provides expert advice, testimony and evidence to the Land and Environment Court of NSW on visual contentions in various classes of litigation.
  - Secondary specialisation in matters of landscape heritage, heritage impacts and heritage view studies
  - Appearances in over 275 Land and Environment Court of New South Wales cases, submissions to Commissions of Inquiry and the principal consultant for over 1000 individual consultancies concerning view loss, view sharing, visual impacts and landscape heritage

A full CV can be viewed on the Richard Lamb and Associates website at www.richardlamb.com.au