rla
richard lamb & associates

SSD 10371

Trinity Grammar School Revitalisation, Summer Hill

View impact assessment

Report prepared for: Bloompark Consulting Group on behalf of

Trinity Grammar School

by Dr Richard Lamb

March 2020

1/134 Military Road, Neutral Bay, NSW 2089 PO Box 1727 Neutral Bay NSW 2089
T 02 99530922 F 02 99538911 E info@richardlamb.com.au W www.richardlamb.com.au

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Executive Summary

Objectives

The objective of this report is to prepare an independent Visual Impact Assessment (VIA) to accompany the DA for redevelopment of the Trinity Grammar School Campus, Summer Hill (TGS).

This VIA includes certification of the accuracy of the preparation of photomontages required to accompany 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 section 6 Plans and Documents in the SEARs.

Methods and Results

The VIA 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 analysis and documentation of existing views and an analysis of baseline factors, analysis of the extent of visual effects, followed by the third main component which is the assessment of visual impacts.

It was found that no significant change would occur to the effect of the project on the visual catchment, or to the visual character, scenic quality, or public domain sensitivity of the site as a result of the construction of the DA.

There would be low to medium visual exposure to most view locations other than some close views that may be associated with higher levels of visual effects.

When the levels of visual effect were weighted against criteria of visual absorption capacity and compatibility with urban features, and the wider visual context, the residual visual impacts were considered to decrease in significance and be low overall.

Conclusions

The results were assessed against relevant legislation and the SEARs.

The overall visual impacts of DA were found to be low and acceptable.

The level of visual change caused by the DA is considered to be an appropriate outcome.

1 Objectives of assessment

1.1 Objectives of this report

Richard Lamb and Associates (RLA) were commissioned by Bloompark Consulting on behalf of Trinity Grammar School, to prepare an independent visual impact assessment (VIA) of the proposed development. The proposed development includes the demolition of central buildings in the school and some of the detached residences in Seaview Street and the construction of a five-storey linear building on the site, including modifications and additions to other parts of the school campus.

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.

1.2 Limitations

This report concerns visual impacts 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

The Secretary's Environmental Assessment Requirements (SEARs) dated 26 September, 2019, Key issue 4 requires as follows;

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

Under Plans and Documents a view analysis is required, as follows:

> ***Plans and documents***
>
> *View analysis, photomontages and architectural renders, including those from public vantage points.*
>
> *Visual impact assessment identifying potential impacts on the surrounding built environment and adjoining heritage items.*

This report includes Visual Impact Assessment, visual analysis and photomontages, as required by the SEARs. Detailed technical investigations including consideration of visual impacts on heritage items have been independently carried out by Urbis Heritage.

1.4 The site and surrounds

The subject site is located at Trinity Grammar School (TGS) and broadly includes the central part of the campus. TGS is located in the south-western part of Summer Hill in the Inner West of Sydney, north and west of Old Canterbury Road. The TGS campus is listed as a heritage item in Schedule 5 of the Inner West LEP.

The TGS campus incorporates a north-south cross-fall the underlying topography of which has been modified over time so that it forms 4 level areas with the majority of the built form massed in the north-east corner, with the north-west, south-west and south-east quadrants being predominantly characterised by open space and sports fields. The north-west sport field is constructed above a part sub-terranean carpark and is the highest of the three, which step down successively to the south and south-east.

The existing Trinity Grammar School (TGS) occupies the majority of a block bounded by Prospect Road to the east, Seaview Street to the north and Victoria Street to the west. Most of the existing built form on the campus is massed in the north-east quadrant and as a spine of buildings running generally north-south between sports fields to its east and west. The built form of the school varies in bulk and scale from the equivalent of approximately 2 to 4 residential storeys, the tallest form being the ridgeline of the centrally located assembly hall and an indoor gymnasium building.

The boundaries of the school are characterised by vegetation including dense semi-continuous mature canopy trees along the east boundary with juvenile, intermittently placed vegetation along the east boundary providing some visual screening. The south side of Seaview Street includes a row of mature Fig trees, the canopies of which extend north across the carriageway and are visually significant in the streetscape.

Yeo Park borders the site to the south and is characterised by open-space and symmetrical ornamental gardens either side of a band rotunda and a number of wide pedestrian paths which cross the park from west to east. The park sits below the school's retained southern sports fields so that it is separated from the fields by a concrete crib wall which is in parts up to 3m high. Approximately half of the length of the retaining wall is screened by semi-mature vegetation in Yeo Park. The south end of Yeo park includes a children's playground and a number of covered park benches. Yeo Park Infants School is located at the south end of Yeo Park beyond the play equipment and borders Gough Reserve which occupies the southern triangular tip of this block. The reserve is characterised by the brick boundary wall of the infants school, a cricket oval, surrounding vegetation and a community building and toilet block at its southern end.

Victoria Street which borders the school to the west, falls in elevation to the south from a high point at its intersection with Seaview Street. It is characterised by low density residential development predominantly including single storey bungalows interspersed with two-storey Inter-War two-storey dwellings and two large Victorian Italianate mansions at 141 and 153 Victoria Street. Dwellings north of Holwood Avenue approximately opposite the north-west sports field, spring from ground levels that are higher relative to it. South of Holwood Avenue the underlying topography falls in elevation to the south as does the ground level of residential development. This situation continues so that south of Harland Street residential development along the west side of Victoria Street springs from levels that are similar to Yeo Park and below the south-west sports field at TGS.

Cardinal Freeman's Aged Care facility is located at the north-west corner of Seaview and Victoria Streets and includes a large and visually significant Victorian era mansion, listed as a heritage item in Schedule 5 of Inner West LEP. The building's location is elevated relative to the entire school site and to other residential flat buildings to the north recently constructed as part of the Aged care facility. We observed that this development includes several four and five storey buildings separated by treed courtyards.

The north side of Seaview Street forms part of a heritage conservation area including Victoria Square which is listed in Schedule 5 of the Inner West LEP.

Victoria Square is characterised by the symmetrical street grid layout to the north and a centrally located heavily treed public park opposite a rear entrance to the school. Residential development immediately north and east of the school along Seaview Street and Prospect Road is low density and predominantly characterised by brick interwar-era or post-World War Two era Californian-style bungalows. The settlement pattern is characterised by a grid system of roads, uniform front and side setbacks occupied by driveways.

2 Project background and description

This assessment concerns the SSDA for the Trinity Grammar School Renewal Project. The stated

2.1 Project Aims and Objectives

The following objectives have been identified as forming the basis of the proposed development of the existing educational establishment:

- Create an education precinct to create a high-quality teaching and learning environment for staff and students;
- Establish additional floor space to increase availability and efficiency of teaching functions for Trinity Grammar School Summer Hill Campus;
- Improve site access, car parking and surrounding traffic functions in the precinct;
- Strengthen pedestrian linkages throughout the campus;
- Enhance the overall campus aesthetic, upgrade the public domain to create visually interesting transitions through the campus, and promote the heritage elements of the campus;
- Ensure minimal environmental impact;
- Maintain the significant green fields assets and provide opportunities for new outdoor environments;
- Ensure development is compatible with surrounding development and the local context; and
- Create a safe environment to support and nurture the boys' growth.

The site and proposed design are considered to meet the objectives of the project as it allows for development on land that has been previously used for educational purposes.

2.2 Description of the Proposal

The proposed development seeks detailed built form approval of new teaching and educational facilities, as detailed below:

- New five (5) storey building at the heart of the Campus to accommodate contemporary, flexible teaching and learning spaces;

- Improve movement and flow for students, with better east-west and north-south links across the school grounds and between levels, including more accessible connections between the Junior School, ovals and car park, and providing strong visual and physical connections;
- Renewal and Refurbishment of existing teaching and learning facilities;
- Reconfiguration and connection of underground car park
- Improve traffic flow for the school drop-off and pick-up zone and improve the safety of boys and visitors who enter the school grounds as pedestrians from Victoria Street;
- New multipurpose pavilion between Ovals 1 and 3 containing a championship size basketball court with practice overlay, spectator seating and amenities;
- Demolition of school-owned residences at 46, 48, 50 and 52 Seaview Street, improving the existing service, maintenance and delivery facilities;
- Improvement and extension to Junior School outdoor teaching, assembly and recreational area.

The proposed development includes the demolition of some parts of the existing campus and the construction of new teaching and learning facilities. The most visible changes to the campus will be the construction of the five-storey linear flat-roofed built form, that is centrally located and in a north-south alignment on the main spine of buildings between sports fields on the east and west sides of the school site.

The proposed central built form will step down in height at its north and south ends so that the central and highest parts of the roof will sit at a level similar to the height of the existing Assembly Hall ridgeline. Proposed modifications to the existing underground north-west carpark and to vehicle access from Victoria Street will result in visible changes to the topography and vegetation above it and will include vertical shade structures, new pedestrian and spectator areas. Shade structures will be located in an east-west alignment between sports fields, towards Victoria Street.

A separate multi-purpose pavilion including basketball and seating facilities between Ovals 1 and 3 will be located at the south end of the new axis of buildings and will be set back from Yeo Park by 6m. Part of the Seaview streetscape presentation will also change with the demolition of school owned properties at 46, 48, 50 and 52 Seaview Street. This space will be occupied by low-scale and height buildings for maintenance and delivery facilities, including the extension of Junior School outdoor teaching, assembly and recreation areas.

3 Visual effects Analysis

The fully detailed methodology for this report is in Appendix 1. 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 B2.2 of the methodology. Section B2.2 details the components of the visual effects analysis matrix. The analysis of the cause and extent of visual effects provides the baseline to the assessment of visual impacts.

3.1 Baseline Visual effects analysis factors

3.1.1 Effective visual catchment of the project site

The site is located at the south-west fringe of Summer Hill on gently undulating topography. Victoria Street on the west side of the site broadly follows a slight ridgeline, rising to a local high point at the intersection of Seaview Street at the north-east corner of the site. The site slopes from here down to the east along Seaview Street, to the south-east toward Prospect Road and to the south boundary.

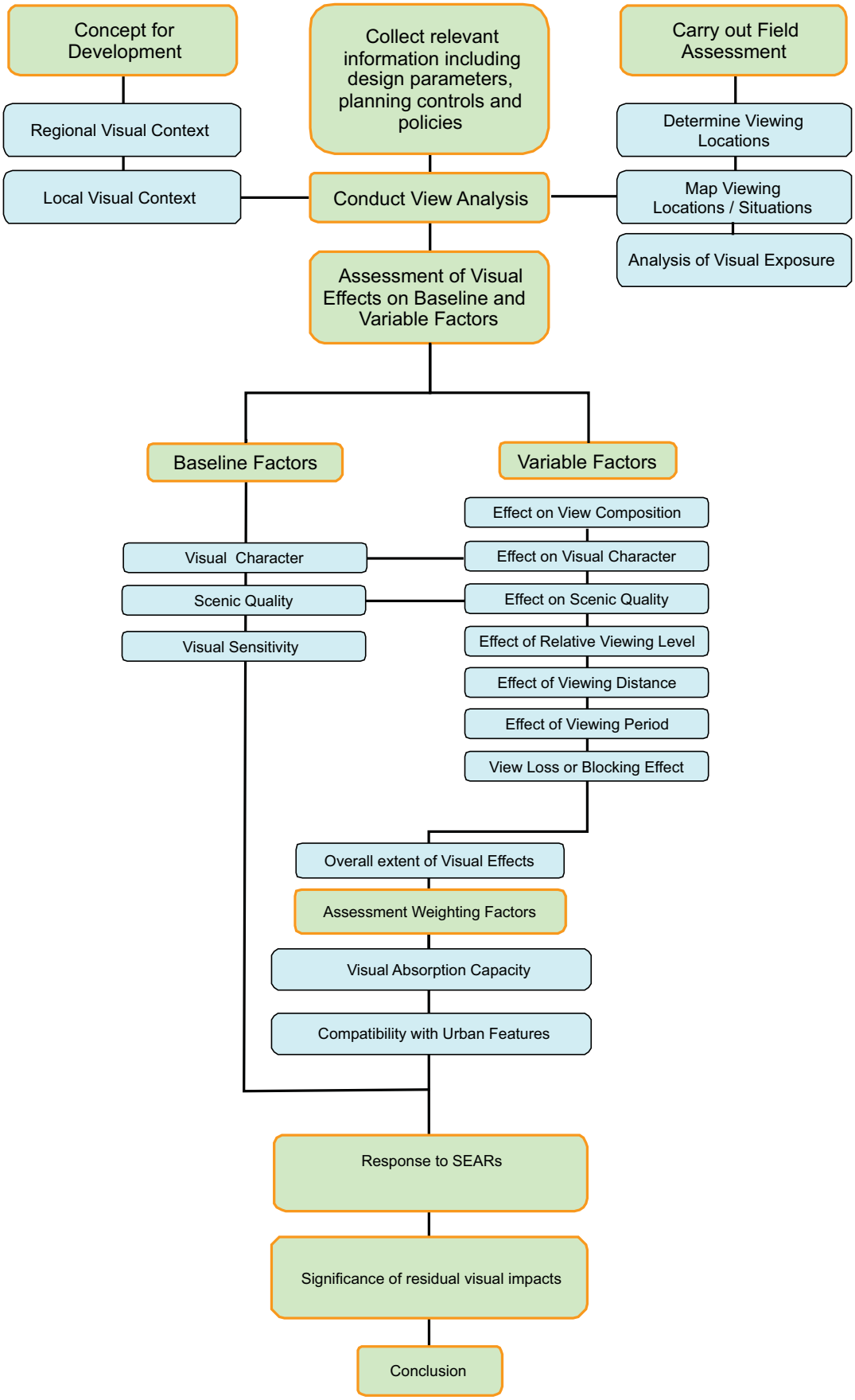
The potential visibility of the DA was determined by RLA using a combination of techniques. These included interpretation of aerial imagery and field observation of the site in close views, using surrounding marker buildings or vegetation to identify the location of the subject site in more distant views, for example the roof of the existing hall and the steeple structure of the Cardinal Freeman Aged Care facility in Victoria Street.

The combination of the street grid alignment, settlement pattern, scale and density of buildings constrains access to views to the external parts of the school and limits the potential visual catchment.

The visual catchment of the TGS campus is therefore constrained to the immediately surrounding residential streets by adjacent residential development, the relatively flat underlying topography, the subdivision planning of adjacent residential areas and existing vegetation. The potential visual catchment in relation to the multi-purpose hall may include adjacent dwellings at the south end of Prospect Road.

The potential visual catchment of the proposed development would also be constrained to the north and east given the central location of the tallest built forms proposed, the wide spatial setbacks of built form from all boundaries and the extent and nature of mature tree canopy, which create significant screening effects to the north, north-east and east. In views from directly north from Victoria Square, existing built form on Seaview Street would largely screen the proposed development behind.

The land to the west and east of the TGS campus falls from north to south creating gentle sloping topography to low points near the intersection of Old Canterbury Road with Prospect Road. Other small low rises exist adjacent to the school, for example north of Seaview Street in the Victoria Square area. The local undulations constrain the extent of the effective (close) visual catchment. Topography to the north-east towards Ashfield and south-west towards Hurlstone Park is similarly undulating, causing shallow dips and gentle inclines which limit the extent of the visual catchment in those directions.


Concept for Development
Collect relevant information including design parameters, planning controls and policies
Carry out Field Assessment
Regional Visual Context
Local Visual Context
Conduct View Analysis
Determine Viewing Locations
Map Viewing Locations / Situations
Analysis of Visual Exposure
Assessment of Visual Effects on Baseline and Variable Factors
Baseline Factors
Variable Factors
Visual Character
Scenic Quality
Visual Sensitivity
Effect on View Composition
Effect on Visual Character
Effect on Scenic Quality
Effect of Relative Viewing Level
Effect of Viewing Distance
Effect of Viewing Period
View Loss or Blocking Effect
Overall extent of Visual Effects
Assessment Weighting Factors
Visual Absorption Capacity
Compatibility with Urban Features
Response to SEARs
Significance of residual visual impacts
Conclusion

Topography also falls westwards from Victoria Street so that parallel streets such as Service Avenue and Queens Street are at slightly lower elevations. The existing built forms on the TGS campus are not visible from these streets and the proposed built form, which is more extensive but similar in height to the maximum existing built form on the site, would not be visible.

The majority of the existing built form, and eastern boundary vegetation which presents to Prospect Road will not change or will not be significantly affected by the proposed development. In other words, existing buildings which form part of the east elevation of the school constrain the extent of the potential visual catchment in this direction.

The external visibility of the site from the south would be greatest from the north-west part of Yeo Park given the open space which characterises this part of the park. However, the significant change of slope that occurs on the school boundary and boundary vegetation in Yeo Park would screen or block most views of built form. The underlying topography of the park continues to fall to the south towards Yeo Park Infants School and Gough Reserve oval. Whilst these locations may fall within the site's potential visual catchment it is likely that views access would be limited due to intervening vegetation, parts of the infants' school buildings and boundary wall. Parts of the multi-purpose pavilion may be visible from some locations.

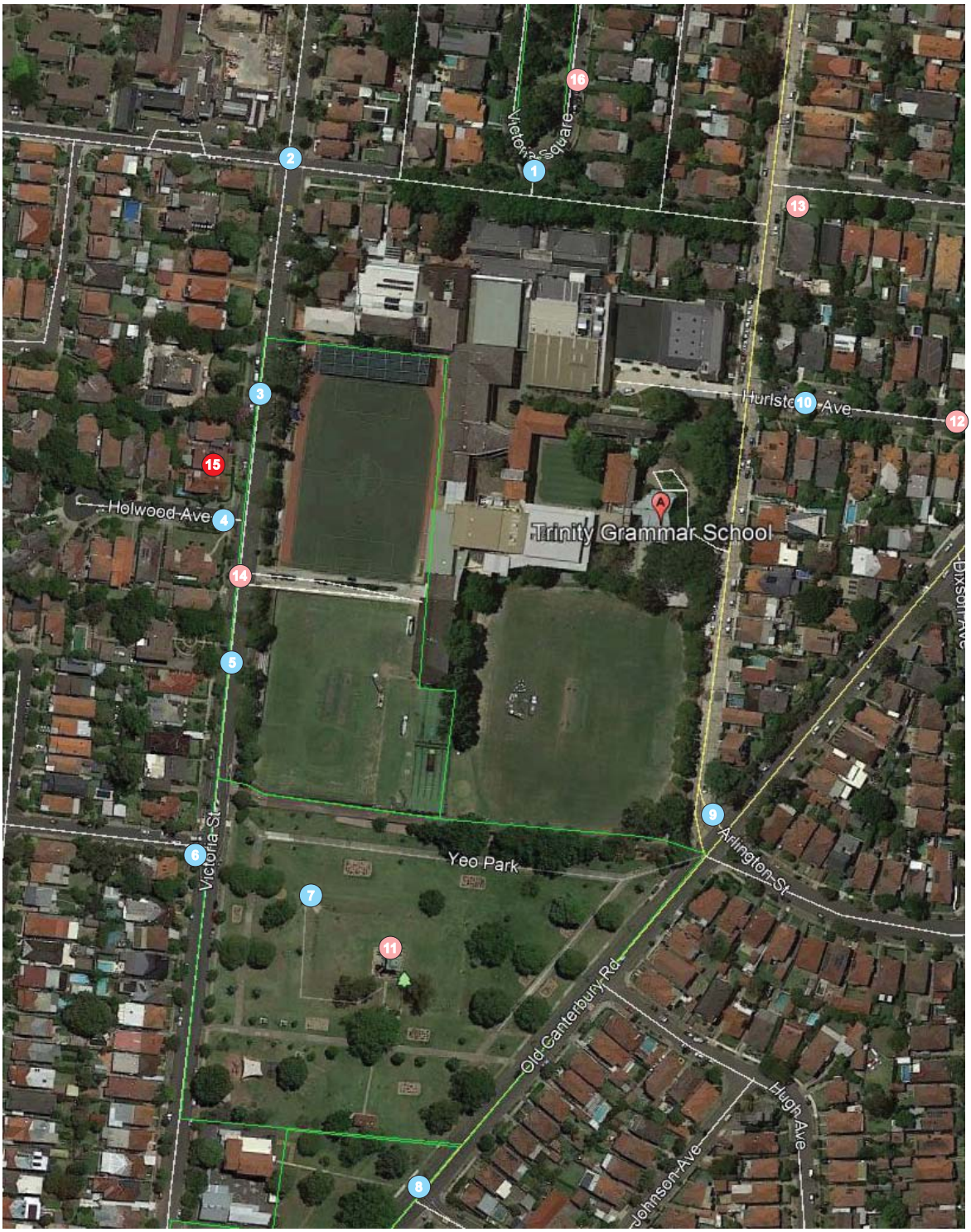
On the basis of the determination of the visual catchment of the site, RLA identified a series of representative view positions (VPs), which represent the range of visual exposure of the site to the public domain. The locations are shown on Map 1. The visual catchment is highly constrained by existing development and is effectively confined to the periphery of the school and a small part of the Yeo park and Gough Reserve, to the south. 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. Priority 2 was given to locations where visual exposure would either be minor, 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.

Table 1 below shows the RLA photograph image number, VP number, a description of the location of the VP and the priority given to each.

RLA photo number	View position Number (VP)	Location in relation to site	Description	Priority 1 or 2
RLA04475	1	Terminus of Victoria Square	View south toward proposed development on the site	1
RLA0473	2	Intersection of Seaview Street and Victoria Street	View south-east toward proposed new buildings and amended site services access	1
RLA04476	3	Victoria Street adjacent to No.153	View east towards the school site.	1
RLA04478	4	Intersection of Victoria Street and Holwoood Ave	View east towards the school site	1
RLA04480	5	Victoria Street adjacent to No. 175	View east towards the south part of the school site	1
RLA04482	6	Intersection of Victoria Street and Harland Street	View north-east toward south-west part of school site.	1
RLA04484	7	Yeo Park at head of steps	View north and north-east toward south part of school site	1
RLA04488	8	Old Canterbury Road	View north-west to south-west part of school site	1
RLA04494	9	Prospect Road, Arlington Street and Old Canterbury Road intersection	View north-west toward school site	1
RLA04491	10	Intersection of Prospect Road and Hurlstone Avenue	Axial view west along street to Prospect Road entrance	1
RLA04485	11	Yeo Park Rotunda entry	View north toward multi-purpose hall site	2
RLA04493	12	Intersection of Hurlstone Avenue and Old Canterbury Road	Axial view west along street including Prospect Road entrance	2
RLA04489	13	Intersection of Prospect Road and Seaview Street	View south-west toward north-east part of school site	2
RLA06269	14	Victoria Street entrance	View east down access of proposed amended driveway	2
RLA06298	15	157 Victoria Road balcony on axis of front door	View east towards the school site	1
P1040161	16	Victoria Square east side	View south toward northern part of school site	2

Not to Scale



Map 1 Trinity Grammar School views analysis

Recommended photomontage view locations

Private domain view location for modelling

Priority 1 11
Priority 2 12
Private location 15

3.1.2 Visual character of the site

The site is characterised by existing built forms that are predominantly massed along the north-south central axis of the site and located along the eastern and norther edges of the school. Along with existing buildings the site is characterised by mature boundary vegetation, sports fields and open spaces. The existing buildings on the site are of generally low external visibility.

3.1.3 Scenic quality

The site would rank as of moderate-high scenic quality with regard to the opportunity for views presented to users of the adjoining effective visual catchment. This medium-high ranking is influenced by the combination of features present in some views including existing heritage building facades visible in some cases, built form widely separated from the school boundaries seen from most view positions, the dominant appearance of a school set among extensive areas of open space and vegetated boundaries that present a partly to substantially screened view to the public domain.

3.1.4 View place sensitivity

The development site ranks as of low to medium view place sensitivity in the present context (Table B 2.1 in Appendix 2 Methodology). It is not highly exposed to the heavily used arterial road, Old Canterbury Road, from which the proposed development would be of low visibility. It is predominantly exposed to low density residential land or reserves (ie. Yeo Park). The composition of views available from Yeo Park would only slightly change with the introduction of the multi-purpose pavilion, parts of which may be visible from some locations to the south including parts of Gough Reserve.

The parts of the site that contain heritage items and assemblages of items are of low external visibility, notwithstanding the whole site is listed as an item of environmental heritage significance. The proposed amended buildings would in most cases either have no effect on the visibility of existing built form, including individual items of heritage significance, or tend to mask individual items and spaces of individual heritage *significance.*

View place sensitivity would be likely to remain as low to medium following construction of the proposed development. In other words, the visual changes caused by the proposed development would have a neutral effect on view place sensitivity. In our opinion there would be no increase in potential public interest in the views or higher number of viewers to experience the views as a result of an approval of the proposal.

3.1.5 Viewer sensitivity

Public domain views to and across the site would vary depending on the proximity of the view location and relative viewing level as is described above in relation to the visual catchment.

Viewer sensitivity is identified and rated on the relevant View Place Data Sheets included in Appendix 5. Similarly, ratings given in relation to viewer sensitivity are also likely to remain the same in relation to the proposed development. Viewer sensitivity is determined by private interests in the effect of the proposal on views and is reflected in the extent to which viewers in the private domain would be affected by the views, particularly in a negative way, such as by view loss.

Viewer sensitivity in the public and private domain decreases with distance. It is considered that the highest impacts occur in the closest sensitivity range (within 100m), with moderate sensitivity at the medium distance range (100m-500mm) and low sensitivity beyond 500m.

3.1.5.1 Private domain views

Built form equivalent to five residential storeys in height as proposed for the north-south central axis may potentially be more visible from immediately surrounding streets including parts of Seaview Street, Victoria Street and Prospect Road than the small area of similar height currently present. The greatest visual exposure would be to residences in Victoria Street. Given the change in topography along Victoria Street, dwellings with the greatest exposure would be those located between Seaview Street and Holwood Ave, with decreasing visual exposure sequentially moving further south.

The greatest potential view access to the location of proposed built form would be from the north end of Victoria Street where dwellings are elevated in relation to the existing TGS campus. From the ground and first floors of dwellings in this vicinity potential views may be available above existing built forms on the campus toward the north-east.

We have not been able to inspect views from neighbouring residential development other than one residence owned by the School at 157 Victoria Street. This is an inter-war two-storey cottage and is similar in age and condition to several others in the street. It is two storeys in height though many other residences in Victoria Street are single storey. The composition of the view from the ground level of the residence (V15), which contains the formal living areas, is similar to the view from the west side of Victoria Road generally (eg. VP 3 and VP4).

The view from the first floor has a higher viewing level, but does not have direct views to features beyond the school site to the east, as these are blocked by existing buildings. An oblique cameo view toward the north-east over the shade structure at the north of the northern playing field on the site and over existing lower buildings facing Seaview Street contains a distant horizon, featuring the profile of taller buildings of the Sydney CBD. This part of the site is not proposed to increase significantly in height and this limited view to the distant feature of the CBD is likely to remain unaffected by the proposed development.

It was observed that with the exception of two early residences with extensive gardens at 153 and 175 Victoria Street, residences in the street are generally at approximately the same setback as 157 Victoria Street and at similar levels relative to the street and the school's west boundary. This means that it is likely that the view for which a photomontage has been prepared (V15) is a reasonable representation of views from residences in its general vicinity, between approximately V3 and V5 on Map 1. The photomontages for V3, V4 and V5, except for a slightly greater viewing distance that would occur in the view from a residence, and a slightly higher viewing position in a residence than at the footpath, give a good indication of the likely view. Residences further south of V5 are at increasingly lower relative levels compared to the school site and as a result, the likely visibility of the proposed development would decrease sequentially in that direction.

The two early residences with extensive gardens at 153 and 175 Victoria Street would be likely to have lower visibility of the proposed development from the ground floors than V15 (57 Victoria

Street), as a result of the greater viewing distance and the presence of foreground vegetation in their gardens.

Based on a number of photomontages and our analysis of the spatial arrangement between the closest dwellings and the tallest parts of the proposed development and the likely view access shown in the photomontages, in our opinion the visual effects of the proposed development on private domain views would be unlikely to be significant.

Although dwellings south of Holwood Ave including for example the single storey dwelling at 169 Victoria Street, may be exposed to views of the proposed development, it is unlikely that they are sufficiently elevated in relation to the site to have existing visual access above or across it to distant, scenic features.

As a result of this analysis, viewer sensitivity is considered to be a baseline factor that would not significantly increase visual impacts.

In our opinion the height of built form proposed is unlikely to create any significant view loss in respect of existing neighbouring residential development. This is considered in more detail in Chapter 3.2.6 below.

3.2 Variable visual effects factors

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

Variable factors which influence the visual effects of the DA are recorded on the data sheets for each view location. (See Appendix 5).

3.2.1 View composition type

Due to the constrained nature of the effective visual catchment, the majority of views analysed are close or medium range views from the immediately surrounding streetscapes. The composition type from each view location is recorded on the data sheets (See Appendix 5). The visual effect of the proposed development on the composition of the views is shown for 11 view places in the photomontages (Appendix 4).

In most views from the west in Victoria Road (for example in VPs 3-6, 14 and 15), the more distant view across the sports fields are restricted, in the existing situation, by the linear built form on the east side of two sports fields. The spine of building is proposed to increase in length toward the south somewhat, but the composition of the views will remain essentially the same in the proposed development. While the detailed appearance of the streetscape in Seaview Street at the north-west end of the site will change with the demolition of some of the existing detached residences, the proposed new built form would be of a similar height and form to existing school buildings extending along Seaview Street to the east of the intersection of Seaview and Victoria Streets (see photomontage for VP 2).

3.2.2 Relative viewing level

The effects of the relative viewing level for each view location are recorded on the data sheets (See Appendix 4). Most relevant public viewing places are level with, slightly above or slightly below the site in relative relief, for example from Victoria Street to the west of the school site and from Prospect Road to the east. As the proposed central building spine would be viewed predominantly against the sky or against a backdrop of other buildings on the site the effect of viewing level is not considered to significantly change visual impacts.

3.2.3 Viewing period

The effects of viewing period are recorded in the data sheets (See Appendix 5). Longer viewing periods provide the circumstances for more analytical and reflective viewing and therefore higher engagement with the visual environment. Two classes of viewing locations could provide the circumstances for longer viewing period and therefore higher engagement with the visual environment (public spaces with recreational or tourism use), such as parts of Yeo Park and Gough Reserve to the south. The visual effects of the proposed development and in particular the multi-purpose pavilion are not anticipated to be significant in relation to the viewing period. It is likely that views from the closest parts of the park for example pedestrian paths or playground would be from moving viewing situations and that the focus of views may be to the more interesting features of the park such as the ornamental gardens and band rotunda. In addition we observed that vegetation is likely to filter or block views.

3.2.4 Viewing distance

The relative effects of viewing distance are described in Appendix 1, Methodology. Typical viewing distances that could be affected have been ascertained for each analysed viewing place and are recorded in the data sheets.

The majority of the viewers would be in the close and medium distance range of the visual catchment or the effective visual catchment. Viewers in the close-range category from the west may see parts of the five-storey central axial building visible against the sky and would be close enough to ascertain architectural details, materials and colours.

The visibility of the proposed built form from the east and south-east would not be significant due to the screening effects of intervening existing buildings and vegetation.

In our opinion as discussed above in section 3.1 viewers located in the distant parts of the potential visual catchment are unlikely to be able to see the TGS campus or perceive the additional height of some of the central buildings proposed.

3.2.5 Overall extent of visual effects

The indicative ratings table for ranking visual effects factors (Table B 2.1 in Appendix 1) was used as a guide to assessment of the overall level of visual effects considered against each of the factors above. The level of visual effects for 11 different view locations of Priority 1 in Table 1 are recorded in the data sheets (See Appendix 5). The visual effects of DA have been assessed in relation to views as required in the SEARs and identified by RLA.

Table 2: Summary of Visual Effects

RLA image and photomontage location	Location Description	Visual Effects of the proposed development shown in photomontages
RLA-04475 V1 Victoria Square	View south-south-east end of Victoria Square to the north boundary of the TGS campus	The majority of the built form proposed is not be visible in this view. The upper parts of the north elevation of the proposed central building are visible above the junior school two-story forms which will remain and would be visible between the canopies of Fig trees along Seaview Street. The highest parts of the central building are visible against a backdrop of sky, but the proposed development does not block views to scenic items to the south. The built forms are spatially well separated from the streetscape presentation of the school to Seaview Street.
RLA-04473 V2 Seaview Street and Victoria Street	View south-east from the north-east corner of Seaview and Victoria Streets	The north-west corner of the proposed new development is partly visible, replacing three existing dwelings owned by the school, that present to Seaview Street. The proposed new buildings are of a similar scale and colour to other school buildings visible from further east along Seaview Street. The new building is compatible with the the existing streetscape, does not dominate the view to south-east and does not block a view to any existing scenic or heritage items.
RLA 04476 V3 Victoria Street at 153	View east from adjacent to 153 Victoria Street on the west side of the road	The northern part of the proposed new central spine of building is visible in essentially the same spatial arrangement vis-à-vis the street as in the existing development. It is higher in part but of a light-weight appearance, articulated and modulated with the effect of reducing apparent bulk. There would be a change in the details of the buildings, with a more unified theme and styling. Overall the existing visual and spatial character of the view would be retained. The higher built form does not block views of significant features. The buildings and landscape complement and enhance the existing visual quality of the view.
RLA 04478 V4 Victoria and Holwoood Ave or 4B	View east-north-east from the intersection of Victoria Road and Holwood Ave	This view is dominated by the foreground of Victoria Street and artificial turfed grounds that sit below road level and will be retained. The proposed development is visible in the midground composition, occupying the horizontal field of view of the school grounds. The consistent, contemporary built form replaces part of the existing built form and although it is in places higher than the buildings it replaces, its stepped nature at the north and south ends reduces its bulk and scale to meet the existing buildings which it will adjoin. The higher built form does not cause any view loss and the built form and landscape complement and enhance the existing visual quality of the view.
RLA 04480 V5 Victoria at No 175	View east-north-east from the west side of Victoria Road admacent to No 175	The southern part of the proposed new central spine of buildings is partly visible in the same spatial arrangement as in the existing development. The changed landscape treatement of the playing field is partly visible. The field is below the view line from the street, as is the case in the existing view. The part of the built form that is visible is articulated and modulated, reducing apparent bulk. The buildings would exhibit a more unified theme and styling, while the overall existing visual and spatial qualities of the view would be retained. The built form and proposed landscape does not block views of significant features.
RLA 04482 V6 Victoria Street and Harland Street	View north-east from the intersection of Victoria Street and Harland Street	The southern part of the proposed spine of new built development is partly visible, substantially screened by existing and future proposed landscape in the vicinity of the southern sports field. The new buildings are highly compatible with the the existing streetscape, do not dominate the view to north-east and do not block a view to any existing scenic or heritage items. The buildings and landscape complement and enhance the existing visual quality of the view.
RLA04484 V7 Yeo Park at head of steps	View east-north-east from head of steps down to formal landscape associated with rotunda	The southern part of the proposed spine of new built development is clearly visible, partly screened by existing and future proposed landscape plantings. The new building at the south end of the spine is closer to the viewer than the existing building, but does not dominate the view to north-east or block a view to any existing scenic or heritage items.
RLA04488 V8 Old Canterbury Road in park	Yeo Park view north from the edge of Old Canterbury Road	The proposed development is of minimal visibility as a result of the screening effects of existing vegetation in the view line. The proposal causes no significant effects on the view.
RLA04494 V9 Prospect Rd Arlington St Old Canterbury Road intersection	View north-west from the intersections of Prospect Road, Arlington Street and Old Canterbury Road	Parts of the proposed southern spine of the development are visible, substantially screened by existing and future proposed landscape. The new buildings are highly compatible with the the existing streetscape, do not dominate the view to the north-west and do not block a view to any existing scenic or heritage items. The buildings and landscape complement and enhance the existing visual quality of the view, retaining the existing spatial relationship with the viewing position and the extensive open foreground.
RLA04491 V10 Prospect Road and Hurlstone Street	View west-north-west from Hurlstone Street adacent to the intersection with Prospect Road	The view is on the axis of the Prospect Road entrance to the School. A partial view of a small part of the proposed development is visible. The proposal does not dominate the view, or block a view to any existing scenic or heritage items. The proposal causes no significant effects on the view.

RLA image and photomontage location	Location Description	Visual Effects of the proposed development shown in photomontages
RLA06298 V15 157 Victoria Street balcony axis of front door	View east from the balcony of 157 Victoria Street on the axis of the front door	The northern and central part of the proposed new central spine of building is visible in essentially the same spatial arrangement as in the view from the street. The parts of the development visible is higher in part that the existing buildings but of a light-weight appearance, articulated and modulated, reducing its bulk. There would be a change in the details of the buildings, with a more unified theme and styling and overall the existing visual and spatial character of the view would be retained. The higher built form does not block views of any significant features.

The visual effects of the DA were modelled in 3D by Digital Line architectural illustrators based on an architectural model prepared by the project architects, following the guidance provided in the Land and Environment Court of New South Wales practice direction for the preparation of photomontages. The details of the methods used and steps taken to satisfy the requirements of the practice direction are in the Photomontage Certification Report at Appendix 3. The photomontages are shown in Appendix 4. In accordance with our methodology (Appendix 1), we determine visual effects to be the baseline against which the assessment of visual impacts is made. A summary of the likely visual effects of the proposed development as demonstrated by the photomontages is shown in Table 2.

There are isolated view positions (for example VP2, VP14) from which higher levels of visual effects would occur, primarily as a result of the visibility of change to the appearance of the built form, demolition of existing residences on Seaview Street, reconfiguration of site access from Victoria Street and change in the appearance, height and detailing of the main north-south spine of buildings visible across the re-configured playing fields from Victoria Road. These changes would be visible from VPs 3, 4 and 7, for example. While there would be changes, the overall spatial qualities of the views, distance between viewers and the built form and distribution of forms in space, would remain substantially the same. The overall character and quality of the views would remain largely unchanged.

The overall extent of visual effects of the proposed development are considered to be low.

3.2.6 View sharing or blocking

There are two planning principles of the Land and Environment Court of New South Wales that are relevant, ie. *Tenacity Consulting v Warringah [2004] NSWLEC 140 - Principles of view sharing: the impact on neighbours (Tenacity)* and *Rose Bay Marina Pty Limited v Woollahra Municipal Council and anor. [2013] NSWLEC 1046 (Rose Bay Marina)*.

3.2.6.1 Tenacity v Warringah

Tenacity concerns view sharing in the private domain and is the most widely referenced planning principle according to Land and Environment Court of New South Wales records. A full assessment of view loss in the private domain adopting the *Tenacity* principles would require a detailed assessment of individual views from existing dwellings that would be more appropriate at the development assessment stage. Nevertheless, it appears unlikely that a view sharing assessment would conclude that the DA would be unreasonable, in the terms of *Tenacity*, for the following reasons.

Roseth SC in *Tenacity* defines a four-step process to assist in the determination of the impacts of a development on views from the private domain. The steps are sequential and conditional, meaning that proceeding to further steps may not be required if the conditions for satisfying the preceding threshold is not met in each view or residence considered.

Step 1 views to be affected

The first step quoted from the judgement in *Tenacity* is as follows:

> *The first step is the assessment of views to be affected. Water views are valued more highly than land views. Iconic views (eg of the Opera House, the Harbour Bridge or North Head) are valued more highly than views without icons. Whole views are valued more highly than partial views, eg a water view in which the interface between land and water is visible is more valuable than one in which it is obscured.*

Prior to undertaking Step 1 however, an initial threshold in *Tenacity* is whether a proposed development takes away part of the view and enjoys it for its own benefit. If it does, the other steps in the planning principle, beginning with Step 1, may need to be undertaken. However, if there is no substantive loss, or if the items lost are not considered to be valued in *Tenacity* terms, the threshold is not met and there is no justification for proceeding to Step 2, or other steps beyond Step 2.

The proposed development does not take views away for its own benefit, as it is in an institutional use of the site that has a long history. The buildings are not designed to make use of views or seek to share them with residential viewers, notwithstanding they may provide views in some cases to the east as a consequence of their proposed form and height. To that extent, the planning principle is of limited relevance. Leaving that aside for the moment, a second issue in the threshold question in Step 1 is whether valued items are likely to be affected by view loss.

In analysing the viewer sensitivity above, it was concluded that it is unlikely that private domain views would be significantly affected by view loss caused by the proposed development, as while the main spine of buildings would be higher in the views east from Victoria Street residences, the existing built form forms the view horizon. Upper floors of two-storey residences toward the higher, northern end of the street, in the vicinity of VP 3, VP15 and VP 4 for example, may have a distant view of the horizon formed by Sydney CBD buildings, seen over lower built form toward the northern part of the school site, but this is not proposed to be significantly increased in height. Therefore, the higher built form in the main spine of the proposed development, visible in the view east from some Victoria Street residences, would not cause any loss of view of items identified as valued, in Step 1 of *Tenacity*.

There would be a qualitative change in the view and a minor reduction in the amount of sky space visible above the built form in some residential views, but no loss it items considered valued in Step 1 in *Tenacity*. As a result, it is considered that the planning principle has no work to do, because the threshold to proceed to Step 2 or beyond, is not met.

3.2.6.2 Rose Bay Marina v Woollahra Council and Anor.

Rose Bay Marina is relevant to view loss in the public domain. The principle in *Rose Bay Marina* contains a recommended approach based first of a quantitative and secondly a qualitative assessment. It also emphasises the need to consider views that have been identified as of specific importance, for example documented heritage views or views identified in planning instruments and policies.

Moore SC sets out a process for assessing the acceptability of visual impacts of private developments on views from the public domain in the vicinity of the development in *Rose Bay Marina*. The process of determining whether a development is acceptable or not must account for reasonable development expectations as well as the enjoyment of members of the public, or outlooks from public places. The principle is divided into 2 Stages involved in assessment, the first factual and the second analytical.

Stage 1

In this stage relevant baseline data is identified and is broken down into 5 key components;

1. Identification of Views

Nature and extent of any obstruction in the view.

Comment:

The nature and extent of obstruction of the views as shown in the photomontages, have been analysed. View obstruction is minimal, as the proposed building heights do not obstruct significant items compared to the effects of the existing buildings.

Relevant compositional elements (eg static, dynamic and frequency if a view is dynamic).

Comment:

View composition has been analysed. There are no significant dynamic viewing opportunities other than for pedestrians in the park to the south or road users on the boundaries of the school site. Viewers would not experience significant view loss from either of these viewing locations.

What might not be in the view (eg compositional elements)

Comment:

Effects on view composition and whether views are from static or dynamic (moving) viewpoints has been analysed. Frequency of views has also been considered in the criterion for viewing period.

Is the change permanent or temporary?

Comment:

Some of the change is permanent, for example construction of new built elements. However, there are no significant changes to the composition of views in the vicinity of the site.

What might be the curtilages of important elements within the view? (eg will an acceptable amount of space around such elements remain to allow the existing setting to be viewed and appreciated?).

Comment:

The proposal is in a setting where the proposed development is surrounded by but significantly separated from residential development or open space. The existing composition of views that are of heritage items or their curtilages and likely effects on the significance of those views have been addressed by Urbis, specialist heritage conservation consultants. Views from the public domain outside the site would not be significantly affected by the proposed development and no significant view loss would occur.

2. Location of Views

The assessment should define locations within the public domain from which the potentially interrupted view is enjoyed.

Comment:

The location of views affected has been analysed and documented. View loss is or interruption of views is unlikely to occur.

3. Extent of Obstruction

A public domain view is one which can be enjoyed by all members of the whole population and therefore it is not appropriate to adopt a normative eye height from which views are to be assessed, as is the case in the Planning Principle developed in Tenacity.

Comment:

The eye height for photomontages has been standardised at 1.6m, as generally assumed in *Tenacity*, however, the assumptions about view loss from the public domain have been made independent of that assumption. A lower eye height, for example for a driver, a child or a disabled person in a wheel chair, for example, has been considered. As the proposed development is widely separated from the public domain in most cases (for example in VPs 3-9, 14 and 15), or alternatively is simply a change to the bulk and height of development seen at closer range (for example in VPs 1, 2 or 10) and further, as the height of the development does not cause loss of view, other than of sky space, there would be no significant obstruction of views, independent of the eye height of a viewer in the public domain.

4. Intensity of the public use

How well used are the public domain locations from which the view is currently enjoyed and therefore how many people (a few, a moderate number or many) will be affected by that or those views being obscured in whole or in part, by the proposed development.

Comment:

The likely number and significance of use of places by the public, as well as the likely period of view available from those places have been taken into account separately and also in assessing view place sensitivity.

5. Identified Views

The assessment must determine whether the importance of public domain views are identified in any document. This includes whether there is specific acknowledgement of the importance of a view eg heritage or is retention or protection of public domain views recorded in any statutory document.

Comment:

The assessment of view place sensitivity considers the importance of public domain views. No specific public domain views are identified in existing or statutory documents of which we are aware. The significance of heritage views and potential impacts on those views have been addressed in detail by Urbis in separate expert technical assessments. The assessment of viewpoint sensitivity in this Visual Impact Assessment acknowledges increased sensitivity associated with the heritage status of adjacent residential areas and of the school as an item.

Stage 2

This involves the analysis of the baseline data, which will need to be weighted in some way in order to develop a quantitative and qualitative assessment.

Qualitative Assessment

This evaluation requires an assessment of aesthetic and other elements in the view, which despite being subjective must follow a defined process which outlines the factors taken into account and the weighting attached to them. As with Tenacity a high value (or weighting) is to be attached to what may be regarded as iconic views of major landmarks) or weight determined by other factors such as the status of a statutory document and the terms in which an objective about views is expressed. A specific weighting framework is not provided.

Factors to be considered include;

Is any significance attached to the view likely to be altered?

Who has attributed the significance to the view and why?

Would a change (ie the proposed development) make this view less desirable?

Would a change alter whether the view is static or dynamic and is this positive or negative?

If the view is a known attraction from a specific location, how will the view be impacted?

Would a change render a view tokenistic?

Has the existing view already been degraded such that the remaining view warrants preservation?

Comment:

Each of these issues for qualitative assessment has been considered, both in relation to the methodology of the assessment and with regard to relevant planning instruments and policies.

Quantitative Assessment

This requires an assessment of the extent of the present view, compositional elements within it and the extent to which the view will be obstructed by or changed by the insertion of the elements of the proposed development.

Relevant questions to answer include; Is the impacted view (which is created after the change) still sufficient for the public to understand the nature of and appreciate the attractive or significant elements which existed in the non-impacted view eg. the view that exists prior to the development?

Moore SC notes that the greater the existing obstruction of a view, the more valuable that which remains may be.

Comment:

Each of these issues for quantitative assessment has also been considered. Specifically, in regard to this part of the *Rose Bay Marina* principle, the obstruction of view would be minimal, caused only by slightly increased height of built form, or changes in the appearance and scale of buildings, that do not cause significant view obstruction. In addition, the changes proposed are primarily of detail and the view affected are highly localised.

In regard to whether the public can understand the nature of and the attractive elements of the view that existed prior to the development, the existing nature and attractive elements of the views would be retained.

Finally, in quantitative terms, the amount of view obstruction that the proposal causes is minor, meaning that the final issue raised by Moore SC in *Rose Bay Marina* is not relevant. The degree of obstruction is minor, the existing view composition is maintained and the view lost does not lead to an increase in the value of what remains.

The analysis of views and the photomontages in Appendix 4 includes views as required in the SEARs which were identified by RLA following analysis of aerial imagery and fieldwork. The analysis of potential view loss that could be caused by the proposed development in each of the quantitative and qualitative assessment issues mentioned in *Rose Bay Marina*, shows that the proposal does not have the potential to block significant views from the public domain.

While the site is adjacent to conservation areas and the site itself is listed as an item of environmental heritage, there are no specific views from the external public domain that are identified as significant in *Rose Bay Marina* terms, in statutory documents. Views of and toward the site as an item of environment heritage have been considered in relation to the visual sensitivity criterion. Visual impacts on the school as an item and on individual items and their curtilages within the site have also been independently addressed by Urbis in expert technical reports.

3.2.6.3 Summary of assessment against view sharing principles

In summary, in relation to view sharing or blocking, considering application of both of the relevant planning principles in *Tenacity* and *Rose Bay Marina*, it is concluded that the DA would not cause significant view loss.

4 Methods and results

This section of the report is based on Section B2.3 of the methodology detailed in Appendix 1. Section B2.3 details the components of the visual impact analysis. The result of the analysis of visual effects (Section 3, above), is the baseline data for the visual impact analysis.

4.1 Visual impact analysis

The significance of visual impacts is differentiated from the extent of visual effects by giving weight to relevant impact criteria. In this way, the relative importance of impacts is distinguished from the size of the visual effects. The weighting factors determined to be appropriate are sensitivity, visual absorption capacity and compatibility with urban and natural features.

4.2 Impact weighting factors

4.2.1 Sensitivity

4.2.1.1 Public domain

The data sheets prepared by RLA acknowledge that the majority of view places inspected are public domain locations with low to moderate numbers of potential viewers in residential streets with views in the close or medium distance range. The presence of the school in the context of adjacent heritage conservation areas, visibility of part of the proposal from public reserves south of the site and the listing of the school itself as an item of environmental heritage is the reason for determination of the visual sensitivity of the site to views from the public domain (view place sensitivity) to be moderate.

4.2.1.2 Private domain

Viewer sensitivity in the private domain is also considered to be moderate, with the proposed development exposed to a small number of individual residences, primarily level with or below the general level of the school site. The moderate sensitivity acknowledges the heritage significance of the adjacent residential areas and of the school itself. However, the views do not include scenic or individual heritage items that are likely to be negatively affected by the proposed development, for example by view blocking. While it would appear higher in some views from the west, the built form would not block views to scenic items, as the existing built form is the horizon for most views.

Taken together, it is considered that visual sensitivity is moderate, or mid-range on the scale of sensitivity. This level of sensitivity is considered to be neutral and does not warrant a change to the significance of impact either up or down, compared to the low overall level of visual effects.

4.2.2 Visual absorption capacity

For most viewers within the effective visual catchment, the environment has a high visual absorption capacity (VAC) for the DA. As discussed in section 3.1 most views to the site are in the close range, many of which are blocked in the foreground by intervening built form or vegetation for example those from the north, north-east, east and south-east. Therefore, the proposed development has a high VAC from those directions. Although the visual exposure of the proposed development is higher in views from the west, the VAC is still considered as medium to high given the height of the proposed main building which is no greater than the highest part of the existing built form and which steps down at either end to meet existing built forms, complemented by the presence of intervening vegetation.

The long form and modest height of the proposed DA would be visible in the context of other existing buildings in the school and substantial buildings in landscape settings surrounding the school, for example Cardinal Freeman aged care facility. In our opinion the visual absorption capacity of the site for the proposed development is high.

In the methodology, high visual absorption capacity tends to reduce the importance of visual impacts compared to the level of visual effects. As a result, the high visual absorption capacity is considered to justify a down-weight on the significance of visual impacts on this criterion.

4.2.3 Compatibility with urban and natural features

The proposed development includes minor and also substantial new built form that is of a contemporary and consistent style, which would tend to unify parts of the existing built form visually, particularly as viewed from the west. In common with many schools and institutions, the existing built form to be replaced, is comprised of a mixture of individual buildings of different periods and styles, additions and alterations, of variable sensitivity to the earlier buildings, sometimes linking and sometimes isolating earlier buildings.

The photomontages show the intended architectural treatment of the main new additions that would be visible and prominent from the immediate vicinity and demonstrate the consistency of its theme and detailing, compared to the existing building stock. The new additions are both consistent and contemporary and the proposed development in terms of height, bulk, scale, materiality and detailing, is of high compatibility with the existing built environment of the school and with the character and quality of the adjacent built environment.

In relation to natural features, the proposed architecture and landscape design are highly supportive of the existing natural setting of the school site, but also of distinctive place-making and way-finding within the proposed amended spaces. It is considered that the proposed development is also of high visual compatibility with natural features of the existing site as well as its heritage values.

In the methodology, high compatibility with urban and natural features also tends to reduce the importance of visual impacts compared to the level of visual effects. As a result, the high value for compatibility is considered to justify a down-weight on the significance of visual impacts on this criterion.

4.3 Applying the weighting factors

The weighting factors are applied to the overall level of visual effects to determine the significance of visual impacts.

The overall level of visual effects on all close and medium range views in the public and the private domain was rated as low.

One of the weighting factors, sensitivity, was rated as neutral, meaning neither an up-weight or a down-weight on impact significance is justified on that criterion. The other two weighting factors, visual absorption capacity and compatibility, both justified a down-weight in impact significance compared to the level of visual effects.

It is invalid however to apply the down-weight of the two weighting factors, as the starting level of overall visual effects is already considered to be low, or bottom of the range. There would be no effect of applying a down-weight to a low value for visual effects.

4.4 Overall visual impacts

Following application of the weighting factors on visual effects, the residual visual impacts of the proposed development are considered to be the same as the level of visual effects which was determined, which is low.

5 Compliance with SEARs

This summary outlines the compliance of our report with the SEARS and the location of relevant information that is required to be addressed.

Key issues, plans and documents	Location of material satisfying requirement
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.*	Visual Impact Assessment methodology: Appendix 1. Visual effects analysis: Chapter 3 Visual impact analysis: Chapter 4.1
Plans and documents *View analysis, photomontages and architectural renders, including those from public vantage points.*	View Analysis: Chapter 3 Certification of photomontages: Appendix 3 Photomontages: Appendix 4

6 Conclusions and Recommendations

This section summarises the conclusions derived from Section 3 (Site Analysis), 4 (Methods and results) and 5 (Assessment) of this report.

6.1 Effect of the project on its visual catchment

The project will have minor to moderate effects on a highly constrained visual catchment primarily to the north-east and west of the site.

Notwithstanding the proposed built form is slightly taller that the existing massing on the subject site in part, its form and character are compatible with the existing development.

The overall visual effect will be to complement and enhance the existing environment of the site.

6.2 Effect on visual character and scenic quality

There would be a low level of visual effect on existing visual character and scenic quality. The proposal would retain the existing spatial characteristics of the site, its overall visual character and the scenic quality of the site and enhance its landscape. The proposal will tend to visually unify the existing disparate quality of the existing built form on the site.

6.3 Effect on private views

In our opinion there would be limited and potentially minor effects of the application on private views from the adjacent residential developments to the west and no significant effect on views from the north and east.

6.4 Effect of variable visual factors

Analysis of the effect of variable factors on the extent of visual effects in Section 3.2 showed that there would not be significant view loss or blocking or change to existing view compositions.

6.5 Overall extent of visual effects

The visual effects of the proposal will be low in all views.

6.6 Overall visual impacts

Consideration of baseline factors and variable weighting factors including sensitivity, visual absorption capacity and visual compatibility with urban features of Summer Hill, resulted in the overall extent of visual impacts remaining low for all views.

7 Conclusion

- The visual context beyond the site includes predominantly low-density residential development and public open space.
- The potential visual catchment is small and highly constrained by the adjacent subdivision pattern, scale of buildings and vegetation.
- The most extensive potential visual catchment is to the west would be limited to the close and medium range public and private domain views from Victoria Street.
- The effective visual catchment includes a limited number of immediately neighbouring residences, some of which are likely to have limited or no existing access to distant scenic features beyond the site.
- We do not anticipate that either public or private domain view loss is likely to be a significant issue.
- Public domain locations of higher sensitivity for example parks and reserves have been considered. Impacts on specific heritage items and views have been considered by others.
- We anticipate that the visual effects of the proposed development will not create significant negative visual impacts in relation to the character or quality of views assessed.
- Certified photomontages prepared for a representative range of views demonstrate that the proposal would complement and enhance the visual environment of Trinity Grammar School and its visual catchment.

Dr Richard Lamb

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 and uses relevant aspects of methods accepted in landscape assessment, extended and modified to adapt to urban and maritime environments. The modifications introduced are informed by visual perception research that has been carried out by ourselves 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.

B.2 Components of the Methodology

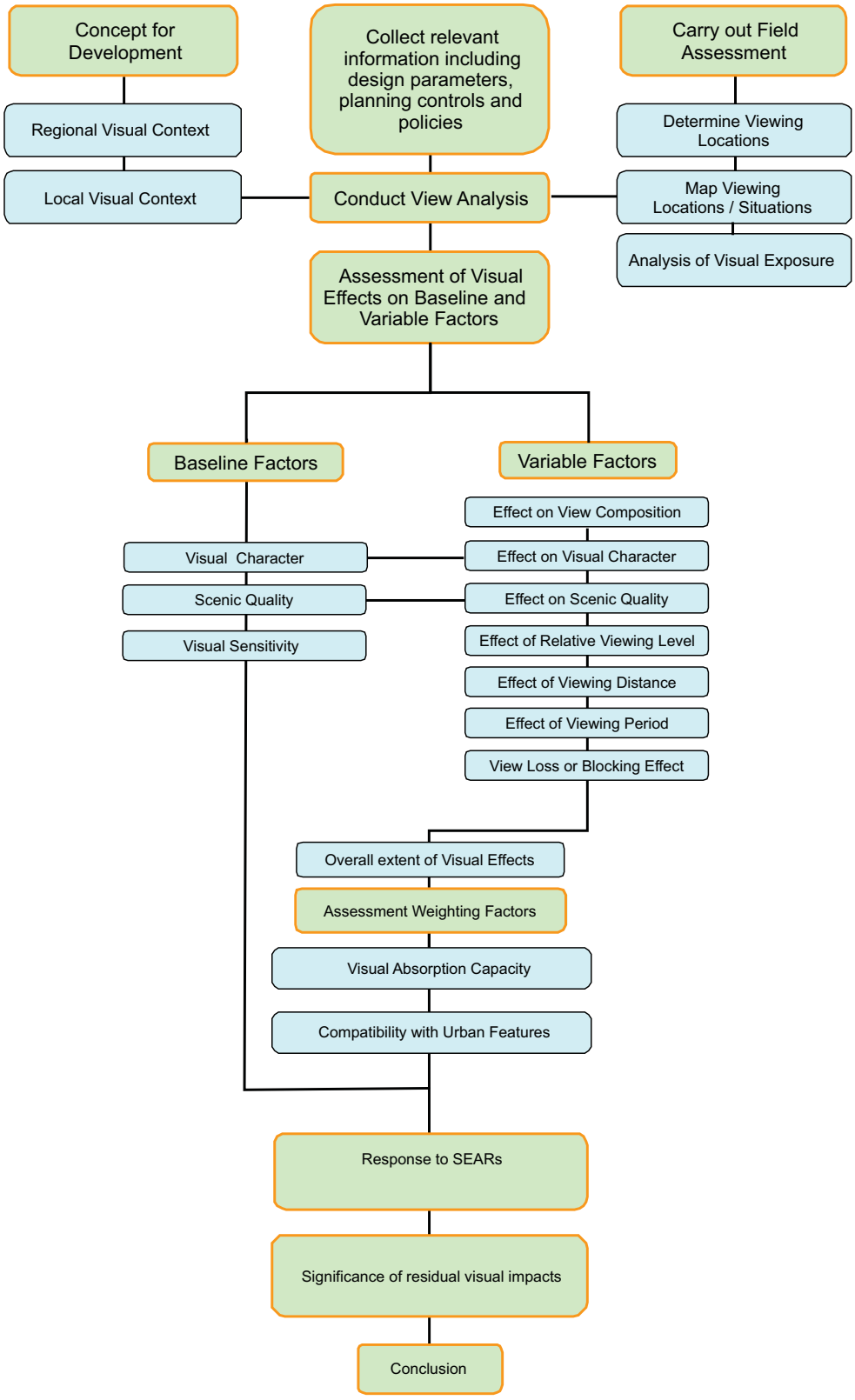
Overall, the major components of the visual impact assessment are determining the concept for the development, and general strategic planning principles, view analysis, visual effects analysis, visual impact evaluation and assessment of significance of residual visual impacts. This assessment is also 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.

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. The assessment factors are explained in Section B2.2 and B2.3. The factors were in three ranges; Low, Medium and High. An indicative rating table that describes what is considered a low, medium and high effect and impact on each factor is shown in Tables B2.1 and B2.2, respectively.

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 2.

Identification and mapping of 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.

B2.2 The components of the Visual Effect Analysis Matrix

B2.2.1 Baseline Factors

These are the criteria that remain predominantly constant and independent of the nature of viewing locations and factors which condition the viewing situation.

Visual character

The visual character of the locality in which the development would be seen is identified. It consists of identification of the physical and built components of the area and the setting of the proposal that contribute to its visual character. The character elements include topography, vegetation, land uses, settlement pattern, urban and built form, interface of land-water elements, maritime features and waterways.

Visual character is a baseline factor against which the level of change caused by the proposal can be assessed. The desired future character of the locality is also relevant to assessing the extent of acceptable change to character.

Scenic Quality

Scenic quality is a measure of the ranking, which the setting of the proposal either is accepted to, or would be predicted to have, on the basis of empirical research carried out on scenic beauty, attractiveness, preference or other criteria of scenic quality.

Scenic quality is a baseline factor against which the visual impacts caused by the proposal are assessed.

View place sensitivity

View place sensitivity means a measure of the public interest in the view. The public interest is considered to be reflected in the relative number of viewers likely to experience the view from a publicly available location. Places from which there would be close or middle-distance views available to large numbers of viewers from public places such as roads, or to either large or smaller numbers of viewers over a sustained period of viewing time in places such as reserves, beaches and walking tracks, are considered to be sensitive viewing places. Sensitivity is also increased by recognised cultural importance of the visual attributes of the site or setting, for example as a heritage item, setting, curtilage or in an identified heritage view.

Viewer sensitivity

Viewer sensitivity means a measure of the private interests in the effects of the proposal on views. The private interest is considered to be reflected in the extent to which viewers, predominantly viewing from private residences, would perceive the effects of the proposal. Residences from which there would be close or medium distance range views affected, particularly those which are available over extended periods from places such as the living rooms and outdoor recreational spaces, are considered to be places of medium and high viewer sensitivity respectively.

B2.2.2 Variable Factors

These are the assessment factors that vary between viewing places with respect to the extent of visual effects.

View composition type

View composition type means the spatial situation of the proposal with regard to the organisation of the view when it is considered in formal pictorial terms. The types of view composition identified are:

Expansive (an angle of view unrestricted other than by features behind the viewer, such as a hillside, vegetation and buildings.)

Restricted (a view which is restricted, either at close range or some other distance, by features between or to the sides of the viewer and the view such as vegetation and buildings.)

Panoramic (a 360 degree angle of view unrestricted by any features close to the viewer who is surrounded by space elements.)

Focal (a view that is focused and directed toward the proposal by lateral features close to the viewer, such as road corridors, roadside vegetation, buildings, boats etc.)

Feature (a view where the proposal is the form element that dominates the view, for example in close range views.)

It is considered that the extent of the visual effects of the proposal is related to its situation in the composition of the view. The visual effect of the proposal on the composition of the view is considered to be greater on a focal or a feature view, cognisant of the distance effect, compared to a restricted, panoramic or expansive view.

Relative viewing level

Relative viewing level means the location of the viewer in relative relief, compared to the location of the proposal. It is conventional in landscape assessment to assess views from locations above,

level with and below the relative location of the proposal. It is considered that the visual effects of a development are related to the relative viewing level and distance. Viewing levels above the development where views are possible over and beyond it decrease the visual effects, whereas views from level with and close to the development, of relatively below it, dependent on viewing distance, may experience higher effects, particularly if built form intrudes into scenic horizons.

Viewing period

Viewing period in this assessment means the influence on the visual effects of the proposal which is caused by the time available for a viewer to experience the view. It is assumed that the longer the potential viewing period, experienced either from fixed or moving viewing places such as dwellings, roads or the waterway, the higher the potential for a viewer to perceive the visual effects of the proposal. Repeated viewing period events, for example views repeatedly experienced from roads as a result of regular travelling, are considered to increase perception of the visual effects of the proposal.

Viewing distance

Viewing distance means the influence on the perception of the visual effects of the proposal which is caused by the distance between the viewer and the development proposed. It is assumed that the viewing distance is inversely proportional to the perception of visual effects: the greater the potential viewing distance, experienced either from fixed or moving viewing places, the lower the potential for a viewer to perceive and respond to the visual effects of the proposal.

Three classes of viewing distance have been adopted which are close range (<100m), medium range (100-1000m) and distant (>1000m). In this project all views analysed are in the close to medium range categories.

View loss or blocking effects

View loss or blocking effects in this assessment means a measure of the extent to which the proposal is responsible for view loss or blocking the visibility of items in the view. View loss in the private domain is considered in relation to the principles enunciated in the Land and Environment Court of NSW by Roseth SC in *Tenacity Consulting v Warringah [2004] NSWLEC 140 - Principles of view sharing: the impact on neighbours.* Although Tenacity concerned view losses from residential properties, the matter of what could be construed to be a valuable feature of the view which could be lost, e.g. specific features of views such as whole views and iconic elements viewed across water, alluded to in *Tenacity*, are of some relevance to the public domain also. View loss in the public domain specifically has been considered in relation to the planning principles in *Rose Bay Marina Pty Limited v Woollahra Municipal Council and anor. [2013] NSWLEC 1046*.

It is assumed that view loss and blocking effects increase the perception of the visual effects of the proposal. View loss and view blocking are important matters for consideration regarding short range views from the public domain.

An indicative rating table that describes what is considered a low, medium and high visual effect on each factor is shown in Table B2.1, below.

Table B 2.1: *Indicative ratings of visual effects factors*

Visual Effects Factors			
Factors	Low Effect	Medium Effect	High Effect
Scenic quality	Proposal does not have negative effects on features which are associated with high scenic quality, such as the quality of panoramic views, proportion of or dominance of structures, appearance of land-water interfaces and presence of extensive areas of water.	Proposal has the effect of reducing any or all of: the extent of panoramic views, diversity of scenic items, the proportion of or dominance of water and maritime features, without significantly decreasing their presence in the view or the contribution that the combination of these features make to overall scenic quality	The proposal significantly decreases or eliminates perception of the integrity of any of: panoramic views, dominance of extensive areas of water and maritime features or important focal views. The result is a significant decrease in perception of the contribution that the combinations of these features make to scenic quality.
Visual character	Proposal does not decrease the presence of or conflict with existing scenic character elements such as built form, building scale, urban fabric, land/water interface and beachside features.	Proposal contrasts with or changes the relationship between existing scenic character elements in some individual views by adding new or distinctive features, but does not affect the overall visual character of the setting.	The proposal introduces new or contrasting features which conflict with, reduce or eliminate existing character features. The proposal causes a loss of or unacceptable change to the overall visual character of individual items or settings in the locality.
View place sensitivity	Public domain viewing places providing distant views, and/or with small number of users for small periods of viewing time (Glimpses-as explained in viewing period).	Medium distance range views from roads, recreation areas and waterways with medium number of viewers for a medium time (a few minutes or up to half day-as explained in viewing period).	Close distance range views from roads, recreation areas, heritage sites, foreshores and waterways with medium to high numbers of users for most the day (as explained in viewing period).
Viewer sensitivity	Residences providing distant views (>1000m)	Residences located at medium range from site (100-1000m) with views of the development available from bedrooms and utility areas.	Residences located at close or middle distance (<100m as explained in viewing distance) with views of the development available from living spaces and private open spaces.
View composition	Panoramic views unaffected, overall view composition retained, or existing views restricted in visibility of the proposal by the screening or blocking effect of structures, buildings or vegetation.	Expansive or restricted views where the restrictions created by new work do not significantly reduce visibility of the proposal or other important features of the visual environment.	Feature or focal views significantly and detrimentally changed by proposal.
Relative viewing level	Elevated position such as ridge top, building or structure with views over and beyond the site.	Slightly elevated with partial or extensive views over the site.	Adjoining streets, shorelines, waterway or reserves with view dominated by proposal.
Viewing period	Glimpse (eg moving vehicles or boats).	Few minutes up to half day (eg walking along foreshore, recreation in adjoining open space, boating on adjoining waterway).	Majority of day (eg adjoining residence or workplace).
Viewing distance	Land area or waterways (Distant Views) (>1000m).	Land or water (Medium Range) (100-1000m).	Adjoining residences, shoreline or waterway (Close)(<100m).
View loss or blocking effect	No view loss or blocking	Partial or marginal view loss compared to the expanse/extent of views retained. No significant loss of views of scenic icons.	Loss of majority of available views such as those of shoreline, waterways, land-water interface, identified scenic horizons, etc. in a restricted or focal view. Loss of views of scenic icons.

B2.2. 3 Overall Extent of Visual Effect

Based on the inspection of the pattern of the assessment ratings for the above factors on each viewing location an overall rating is arrived at which represents an overall extent of visual effects for a viewing location.

B2.3 The Components of the Visual Impact Analysis

The criteria in 2.2 concern assessment of the extent of the visual effects of the proposal when seen from specific viewing places. The extent of the visual effects is the baseline assessment against which to judge the visual impacts.

Whether a visual effect is an impact of potential significance cannot be equated directly to the extent of the visual effect. For example, a high visual effect can be quite acceptable, whereas a small one can be unacceptable. Thus, it is necessary to give a weighting to the assessed levels of effects to arrive at an assessment of the impact.

This method therefore does not equate visual effects directly to visual impacts. The approach is to assess visual effects as in B2.2. above to arrive at an overall level of visual effect of the proposal for each kind of viewing place and then to assess the level of impact, if any, by giving differential weighting to impact criteria. By this means, the relative importance of impacts are distinguished from the size of the effect. We consider that three weighting criteria are appropriate to the overall assessment of visual impacts, Visual Absorption Capacity and Visual Compatibility. Visual compatibility is considered in relation to the urban features generally and also in relation to the heritage items and settings. Each of these addressed the primary question of the acceptability of the visual effects and changes caused by the proposal.

B2.3.1 Visual Absorption Capacity

Visual Absorption Capacity (VAC) means the extent to which the existing visual environment can reduce or eliminate the perception of the visibility of the proposed redevelopment.

VAC includes the ability of existing elements of the landscape to physically hide, screen or disguise the proposal. It also includes the extent to which the colours, material and finishes of buildings and in the case of buildings, the scale, character, materiality and detailing of these allows them to blend with or reduce contrast with others of the same or closely similar kinds to the extent that they blend with existing features of the environment.

Prominence is also an attribute with relevance to VAC. It is assumed in this assessment that higher VAC can only occur where there is low to moderate prominence of the proposal in the scene.

Low to moderate prominence means:

Low: The proposal has either no visual effect on the landscape or the proposal is evident but is subordinate to other elements in the scene by virtue of its small scale, screening by intervening elements, difficulty of being identified or compatibility with existing elements.

Moderate: The proposal is either evident or identifiable in the scene, but is less prominent, makes a smaller contribution to the overall scene, or does not contrast substantially with other elements or is a substantial element, but is equivalent in prominence to other elements and landscape alterations in the scene.

Design and mitigation factors are also important to determining the VAC. Appropriate colours, materials, building forms, line, geometry, textures, scale, character and appearance of buildings and other structures are relevant to increasing VAC and decreasing prominence.

VAC is related to but distinct from Visual Compatibility (see below).

B2.3.2 Visual Compatibility

Visual Compatibility is not a measure of whether the proposal can be seen or distinguished from its surroundings. The relevant parameters for visual compatibility are whether the proposal can be constructed and utilised without the intrinsic scenic character of the locality being unacceptably changed. It assumes that there is a moderate to high visibility of the project to some viewing places. It further assumes that novel elements which presently do not exist in the immediate context can be perceived as visually compatible with that context provided that they do not result in the loss of or excessive modification of the visual character of the locality.

A comparative analysis of the compatibility of similar items to the proposal with other locations in the area which have similar visual character and scenic quality or likely changed future character can give a guide to the likely future compatibility of the proposal in its setting.

Because the development proposed is on the interface between urban, recreational and open space land, the question of its visual impacts also depends on its perception both as an entity and in regard to its compatibility with the major scenic character attributes. In this regard, both the urban/natural environment and the Heritage Conservation Area are attributes of relevance. Hence, it is considered that there are two relevant measures of Visual Compatibility, i.e. Compatibility with Urban and Natural Features, and Compatibility with Heritage Items and Settings.

B2.3.2.1 Visual compatibility with urban and natural features

This assessment is a measure of the extent to which the visual effects of the proposal are compatible with urban and natural features. It is assumed that in some views the proposal will be seen and clearly distinguished from its surroundings. Compatibility does not require that identical or closely similar features to those which are proposed exist in the immediate surroundings.

Compatibility with Urban and Natural Features means that the proposal responds positively to or borrows from within the range of features of character, scale, form, colours, materials and geometrical arrangements of urban and natural features of the surrounding area or of areas of the locality which have the same or similar existing visual character.

B2.3.2.2 Visual compatibility with heritage items and settings

This assessment is a measure of the extent to which the visual effects of the proposed development are compatible with the attributes identified as heritage items and settings. It is assumed that in some views the proposal will be seen and contrasts with existing heritage items and settings. As with compatibility with urban and natural features, compatibility with heritage items and settings does not require that identical or closely similar features to those which are proposed exist in the immediate surroundings.

Compatibility on this criterion means that the proposal responds positively to, borrows from or appropriately extends the range of features of character, scale, form, colours, materials and overall qualities of adjacent items and sites of the surrounding area or of similar areas of the locality or region.

Our approach to the issue of visual compatibility of development proposals with heritage items and settings adopts a systematic approach to identifying the existence of and the authenticity of the views, from an historical perspective, as set out below.

B2.3.2.3 Hierarchy of Historic views

Our approach to heritage views, as is the case with visual impacts generally, is to adopt a logical, explicit methodology that it based as much as possible on objective and empirical data as a starting point and not on myth and speculation. The facts of what is visible, from where and in what existing and historical context, are critical, in determining what constitutes historic views and how to assess contemporary impacts on them. If a logical, systematic and comprehensive approach is not taken, subjective, speculative and abstract claims about historic views may in some cases gain more credence than they deserve.

Our position is there is a hierarchy of heritage views, from the most to the least likely to be significant, with regard to determining impacts on heritage values.

At the highest level, we consider that a genuine heritage view is one designed to be experienced, where the intention is documented and where the reason for the view being recognised as significant is supported by the recognition of the values against the relevant heritage criteria, including the inclusion and exclusion guidelines, required in the NSW heritage system. Historical research should support such views as being authentic heritage views, the locations of which and attributes of which are determined to be of significance (level 1, or L1).

At the second level are views that have become recognised or have evolved as of authentic heritage significance. There can be many pathways to recognition; for example, views may become socially significant, become significant by historical association with other, later events and items, or through accretion of later items, become significant for archaeological, scientific, aesthetic or other reasons relevant to views (level 2, or L2).

At a third level, views between heritage items may become of authentic heritage value by visual linkages deliberately designed between subsequent heritage items and places, linkages occurring through use or changing customs, or linkages created by the loss of former linkages and settings, making them more valued, or rare. These are authentic, evolved, or acquired heritage views (level 3 L3).

Below that level are views of and between heritage items that exist in the objective sense, but are incidental. That is, their existence, while providing an attribute of the setting, does not contribute to the authentic values of the items or contribute substantial significance to the view. Views between the items in this case exist, but are not of substantial significance in themselves. (level 4, or L4).

At a lower level still, on the hierarchy of views that might be claimed to be heritage views, are views from or in the vicinity of items, the curtilages or settings of items, from which new or non-significant items are visible. Simply being able to see a heritage item, place or setting, does not make the view a heritage view. By the same token, being able to see a new, different or novel item of no current significance, in the context of a heritage item, does not create an impact on heritage values, unless it can be demonstrated that the acknowledged authentic heritage values of the item at levels 1-3 would be impaired to the detriment of the significance or the interpretation of the heritage values of the item (level 5, or L5).

An indicative rating table that describes what is considered a low, medium and high impact on each weighting factor is shown in Table B2.2, below.

Table B2.2: *Indicative ratings table of visual impacts factors*

Visual Impacts Factors			
Factors	Low Impact	Medium Impact	High Impact
Visual absorption capacity	Existing elements of the landscape physically hide, screen or disguise the proposal. The presence of buildings and associated structures in the existing landscape context reduce visibility. Low contrast and high blending within the existing elements of the setting and built forms.	The proposal is of moderate visibility but is not prominent because its components, forms and line and its textures, scale and building and vessel form have low to moderate contrasts with existing features of the scene.	The proposal is of high visibility and it is prominent in some views. The project has a high contrast and low blending within the existing elements of the setting and foreshores.
Compatibility with urban/natural features	High compatibility with the character, scale, form, colours, materials and geometrical arrangements of existing urban and natural features in the immediate context. Low contrast with existing elements of the built environment.	Moderate compatibility with the character, and geometrical arrangements of the existing urban and natural features in the immediate context. The proposal introduces new urban features, but these features are compatible with the scenic character and qualities of facilities in similar settings.	The character, scale, form and spatial arrangement of the proposal has low compatibility with the urban features in the immediate context or which could reasonably be expected to be new additions to it when compared to other examples in similar settings.
Compatibility with heritage items and settings	High compatibility with the character, scale, form, colours, materials and geometrical arrangements of existing items in the immediate context. Low contrast with existing elements of the adjacent environment. Identified heritage views are not significantly affected by the proposal. Proposal has no physical impact on heritage values. Proposal is a background item that does not significantly affect the heritage significance of the setting. Views affected are of level 4 or 5 in significance.	Moderate compatibility with the character and built form of the existing setting in the immediate and also the wider context. The proposal introduces new features, but these are compatible with the scenic character and qualities of the setting. Proposal has a low impact on values of views identified as of level 1-3 in significance. The composition of the setting of the items or conservation areas in the views is either not significantly affected or is affected to a medium extent.	The character, scale, form and spatial arrangement of the proposal has low compatibility with the context or which could reasonably be expected to be new additions to it. The view affected by the proposed development is identified as a heritage view in relevant planning instruments and policies. The proposed development is a foreground element affecting appreciation or interpretation of views of level 1-3 in significance. The attributes of the proposal devalue the established heritage significance of recognised views, items or settings.

B2.4 Overall Extent of Visual Impact

Based on the inspection of the pattern of the assessment ratings for the above factors for each viewing location, an overall rating is arrived at which represents an overall extent of visual impacts.

Three visual sensitivity zones are identified which are based on the view place sensitivity or viewer sensitivity as explained above in Section B2.2.1. These are related to the distance zones from the development site and whether views are from significant public domain or private viewing locations. Viewing places within the high or medium visual sensitivity zones are further assessed as explained below.

B2.4.1 Applying the weighting factors

An overall impact rating for each of the two relevant visual sensitivity zones is arrived at by applying the weighting factors of VAC and Compatibility under the two criteria above, to the overall extent of visual impacts. An upweight increases the significance of the impact, while a down-weight decreases it.

B2.5 Analysis against relevant controls/policies

The proposed development and its overall impacts on each of the visual sensitivity zones is analysed.

B2.6 Significance of residual visual impacts

Finally, after the visual effects of the mitigation factors are assessed, a relevant question is whether there are any residual visual impacts and whether they are acceptable in the circumstances. These residual impacts are predominantly related to the extent of permanent visual change to the immediate setting.

In terms of the urban component of the development, residual impacts relate to individuals' preferences for the nature and extent of change which cannot be mitigated by means such as colours, materials and the articulation of building surfaces. These personal preferences are also a result of people's resistance to or resilience towards change to the existing arrangement of views. Individuals or groups may express strong preferences for either the existing, or proposed form of urban development. Whether overcoming these impacts would result in undermining of the potential capacity of the development site to economically support the intended use is not the focus of a visual impacts assessment.

VP1
View south from Victoria Square to the school site

VP2
View south-east from the corner of Seaview Street and Victoria Street

VP3
View east from adjacent to 153 Victoria Street

VP3B
View east from the school fence opposite 153 Victoria Street

VP4

View north-east from the corner of Holwood Avenue and Victoria Street

VP4B

View east from the school boundary fence opposite the corner of Holwood Avenue and Victoria Street towards the subject site and location of the taller component of built form proposed.

VP5
View from adjacent to 175 VIctoria Street

VP5B
Detail from school boundary opposite 175 Victoria Street

VP6
View north-east from the west side of Victoria Street at the Harland Street intersection

VP6B
View north from the east side of Victoria Street opposite Harland Street at the School fence

VP7
View north from the top of the western steps at Yeo Park

VP8
View north towards the school site from Yeo Park near Old Canterbury Road

VP9

View north-west from Prospect Road at the intersection of Prospect Road, Arlington Street and Old Canterbury Road

VP9B

View west across the south-east fields of Trinity Grammar School from Prospect Road opposite the Arlington Street intersection

VP10
View along Hurlstone Avenue near the Prospect Road entrance to the School

VP11
View north from the entry to the band rotunda in Yeo Park

VP12

View west along Hurlstone Avenue from the intersection of Old Canterbury Road

VP13

View south-west from the corner of Prospect Road and the eastern limb of Seaview Street. The intersection of the northern limb of Seaview Street is visible on the right

VP14
Detail of the existing entrance on Victoria Street

VP14B
The existing entrance on Victoria Street from the west side of the street

VP15
View from balcony on the axis of the front door at 157 Victoria Road

VP15B
View from first floor bedroom standing at window of 157 Victoria Road (50 mm lens used for emphasis)

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 building 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.

PMDL Architects (PMDL) prepared the 3D model of the proposed development using the software Vector Works and survey information for the site provided by LTS Lockley registered surveyors (LTS). The model was supplied to Digital Line expert architectural illustrator, 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 were taken by RLA using a professional quality 35mm format full-frame camera. The locations and RLs of the lens of the camera for photographs used to prepare photomontages were established by survey by LTS, 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 BIM survey showing part of the survey and the camera locations, prepared by LTS Lockley, 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 2.

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 vastly 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, that convention cannot always be adopted other than for relatively distant views, as the horizontal and vertical scale of the buildings particularly from close locations cannot be accommodated in a single frame of 50mm focal length. 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.

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 Digital Line.
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. Minor inconsistencies occur due to the natural distortion created by the camera lens, were reviewed by Dr Richard Lamb and were approved by him for use after modifications as required.

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:

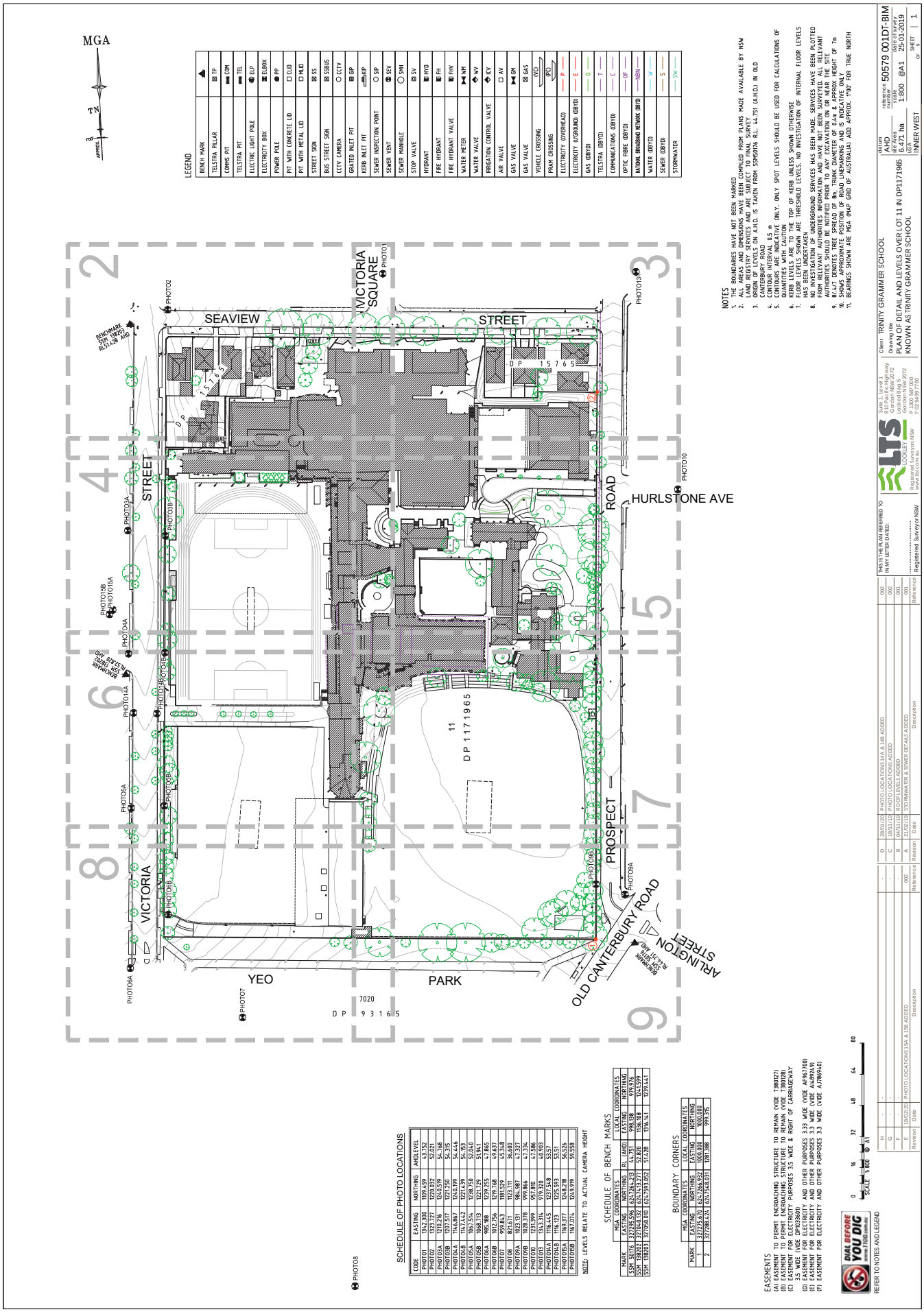
- Variance between measured focal length compared to stated focal length,
- Minor lens distortion which varies from lens to lens and manufacturer to manufacturer,
- Absence of a suitable range of reference points on site/visible through lens

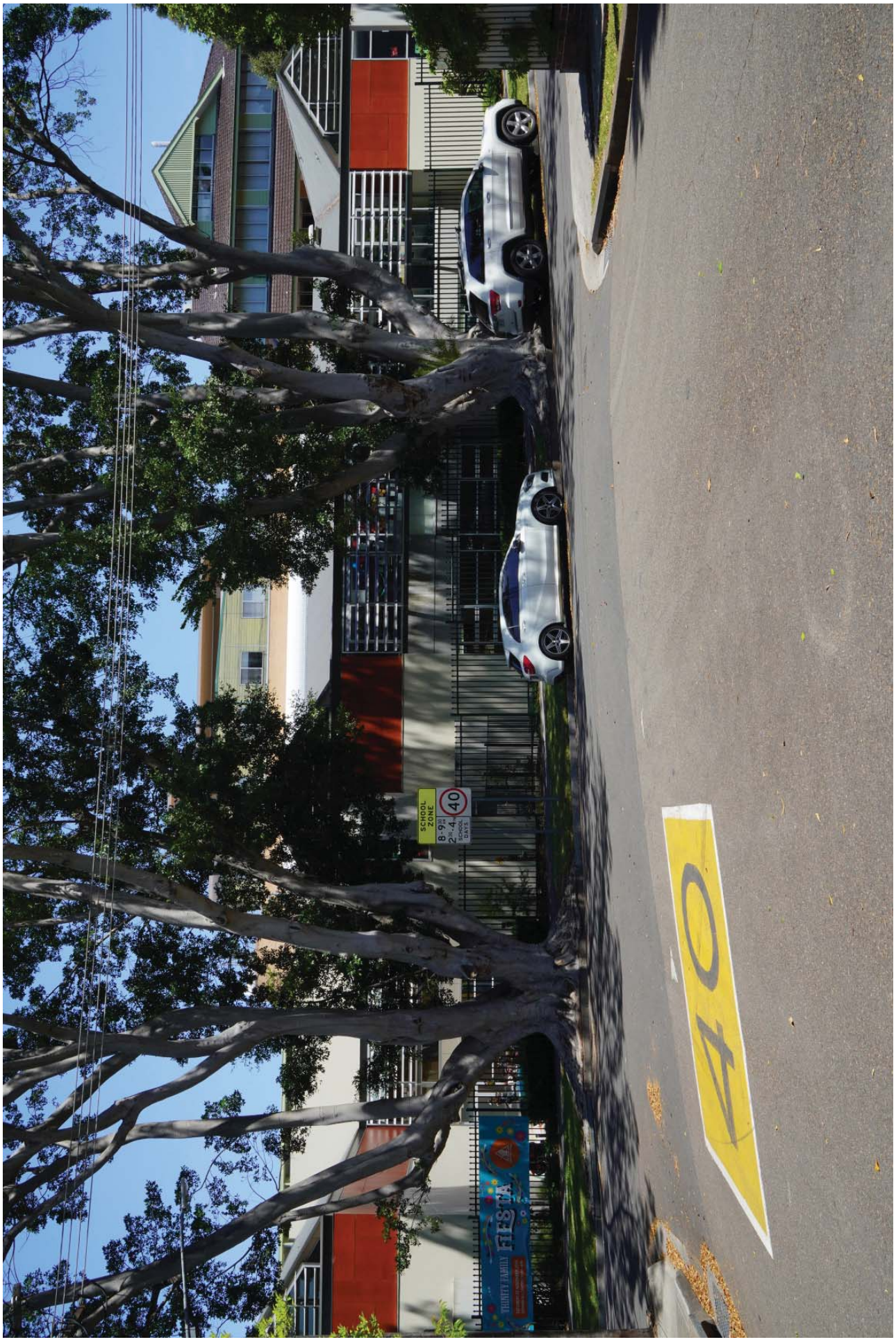
Allowing for these limitations, Digital Line reported that the alignment was achieved to a high degree of accuracy, within an acceptable tolerance.

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. Digital Line have used survey information to locate the 3D model in each view. In our opinion the use of surveyed markers as shown by Digital Line is equivalent to showing a wire-frame diagram and demonstrates that the 3D model has been accurately aligned and fits into the existing context.

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 note concerning the use of photomontages in the Court, as required in the SEARs.


MGA
LEGEND
BENCH MARK
TELSTRA PILLAR
COMMS PIT
TELSTRA PIT
ELECTRIC LIGHT POLE
ELECTRICITY BOX
POWER POLE
PIT WITH CONCRETE LID
PIT WITH METAL LID
STREET SIGN
BUS STREET SIGN
CCTV CAMERA
GRATED INLET PIT
KERB INLET PIT
SEWER INSPECTION POINT
SEWER VENT
SEWER MANHOLE
STOP VALVE
HYDRANT
FIRE HYDRANT
FIRE HYDRANT VALVE
WATER METER
WATER VALVE
IRRIGATION CONTROL VALVE
AIR VALVE
GAS VALVE
GAS VALVE
VEHICLE CROSSING
PRAM CROSSING
ELECTRICITY (OVERHEAD)
ELECTRICITY (UGROUND) (DBYD)
GAS (DBYD)
TELSTRA (DBYD)
COMMUNICATIONS (DBYD)
OPTIC FIBRE (DBYD)
NATIONAL BROADBAND NETWORK (DBYD)
WATER (DBYD)
SEWER (DBYD)
STORMWATER
VICTORIA SQUARE
SEAVIEW
STREET
HURLSTONE AVE
ROAD
PROSPECT
VICTORIA
STREET
YEO
PARK
OLD CANTERBURY ROAD
ARLINGTON STREET
DP 1171965
DP 15765
DP 93165
7020
PHOTO1
PHOTO2
PHOTO3
PHOTO4A
PHOTO4B
PHOTO5A
PHOTO5B
PHOTO6A
PHOTO6B
PHOTO7
PHOTO8
PHOTO9A
PHOTO9B
PHOTO10
PHOTO11
PHOTO12
PHOTO13A
PHOTO13B
PHOTO14A
PHOTO14B
PHOTO15A
PHOTO15B
NOTES
1. THE BOUNDARIES HAVE NOT BEEN MARKED
2. ALL AREAS AND DIMENSIONS HAVE BEEN COMPILED FROM PLANS MADE AVAILABLE BY NSW LAND REGISTRY SERVICES AND ARE SUBJECT TO FINAL SURVEY
3. ORIGIN OF LEVELS ON A.H.D. IS TAKEN FROM SSM50176 R.L. 44.751 (A.H.D.) IN OLD CANTERBURY ROAD
4. CONTOUR INTERVAL 0.5 m
5. CONTOURS ARE INDICATIVE ONLY. ONLY SPOT LEVELS SHOULD BE USED FOR CALCULATIONS OF QUANTITIES WITH CAUTION
6. KERB LEVELS ARE TAKEN AT THE TOP OF KERB UNLESS SHOWN OTHERWISE
7. FLOOR LEVELS SHOWN ARE THRESHOLD LEVELS NO INVESTIGATION OF INTERNAL FLOOR LEVELS HAS BEEN UNDERTAKEN
8. NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. SERVICES HAVE BEEN PLOTTED FROM RELEVANT AUTHORITIES PLANS WHERE AVAILABLE. NOT ALL SERVICES MAY BE SHOWN. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE
9. B/A/T DENOTES TREE SPREAD OF 8m, TRUNK DIAMETER OF 0.4m & APPROX HEIGHT OF 7m
10. SHOWS APPROXIMATE POSITION OF ROAD LINEMARKING AND IS INDICATIVE ONLY
11. BEARINGS SHOWN ARE MGA (MAP GRID OF AUSTRALIA) ADD APPROX. 1°00' FOR TRUE NORTH
SCHEDULE OF PHOTO LOCATIONS
SCHEDULE OF BENCH MARKS
BOUNDARY CORNERS
EASEMENTS
(A) EASEMENT TO PERMIT ENCROACHING STRUCTURE TO REMAIN (VIDE T380127)
(B) EASEMENT TO PERMIT ENCROACHING STRUCTURE TO REMAIN (VIDE T380128)
(C) EASEMENT FOR ELECTRICITY AND OTHER PURPOSES 3.5 WIDE & RIGHT OF CARRIAGEWAY 3.5 WIDE (VIDE DP1033601)
(D) EASEMENT FOR ELECTRICITY AND OTHER PURPOSES 3.33 WIDE (VIDE AF967100)
(E) EASEMENT FOR ELECTRICITY AND OTHER PURPOSES 3.3 WIDE (VIDE AA499249)
(F) EASEMENT FOR ELECTRICITY AND OTHER PURPOSES 3.3 WIDE (VIDE AJ786440)
DIAL BEFORE YOU DIG
REFER TO NOTES AND LEGEND
SCALE 1:600 @ A1
Client TRINITY GRAMMER SCHOOL
Drawing title
PLAN OF DETAIL AND LEVELS OVER LOT 11 IN DP1171965
KNOWN AS TRINITY GRAMMER SCHOOL
LTS
Suite 1, Level 4
1-5 Railway Parade
Gordon NSW 2072
Locked Bag 3
Gordon NSW 2072
P 1300 587 000
F (02) 9499 7760
Registered Surveyors NSW
www.lts.com.au
THIS IS THE PLAN REFERRED TO IN MY LETTER DATED
.....
Registered Surveyor NSW
DATUM AHD
AREA 6.471 ha
LGA INNER WEST
reference 50579 001DT-BIM
initial issue
date of survey 25-01-2019
SCALE 1:800 @A1
SHEET 1 of 9



VP1 Photomontage

View south from Victoria Square to the school site

VP2 Photomontage

View south-east from the corner of Seaview Street and Victoria Street

VP3 Photomontage

View east from adjacent to 153 Victoria Street

VP4 Photomontage

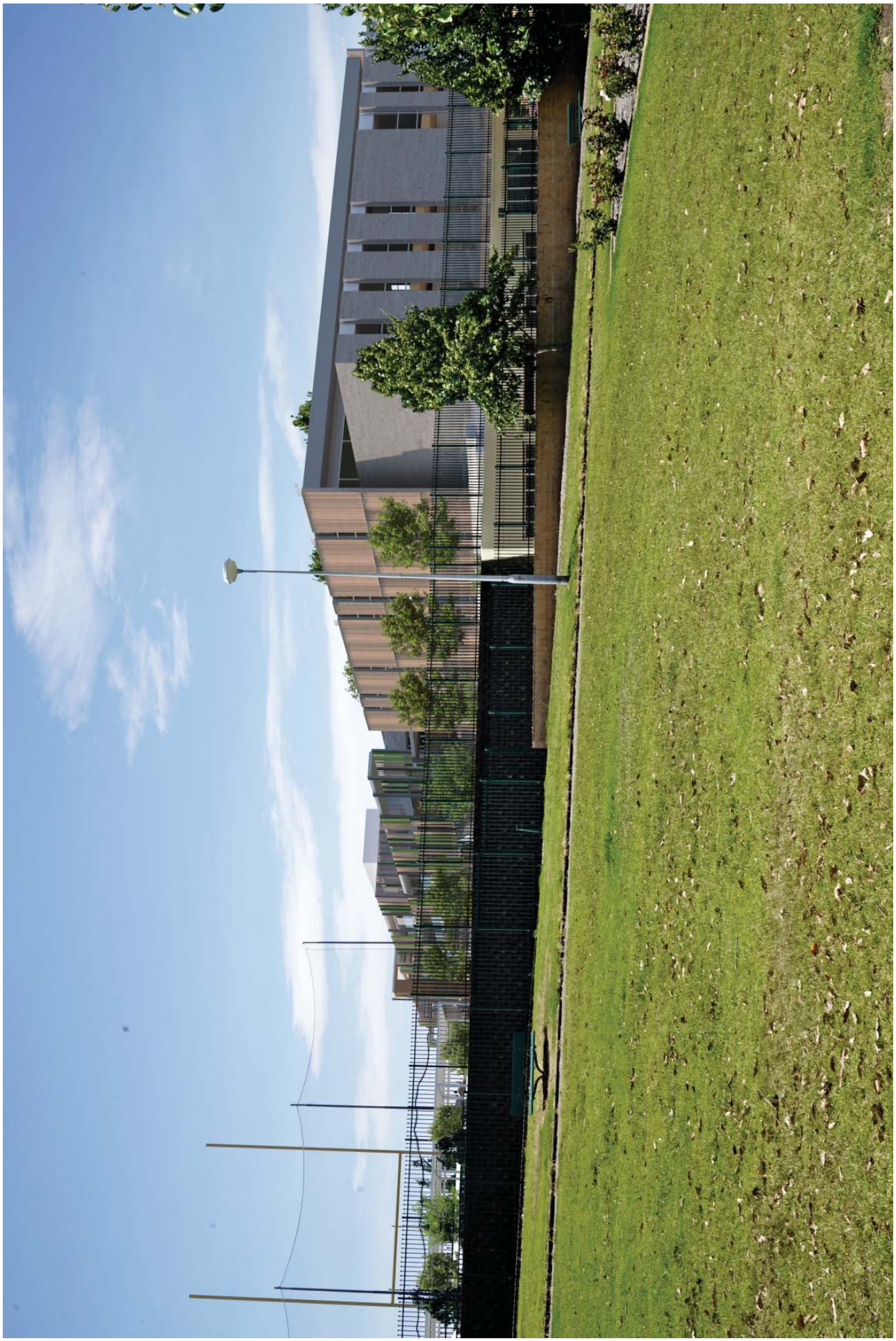
View north-east from the corner of Holwood Avenue and Victoria Street

VP5 Photomontage

View from adjacent to 175 VIctoria Street

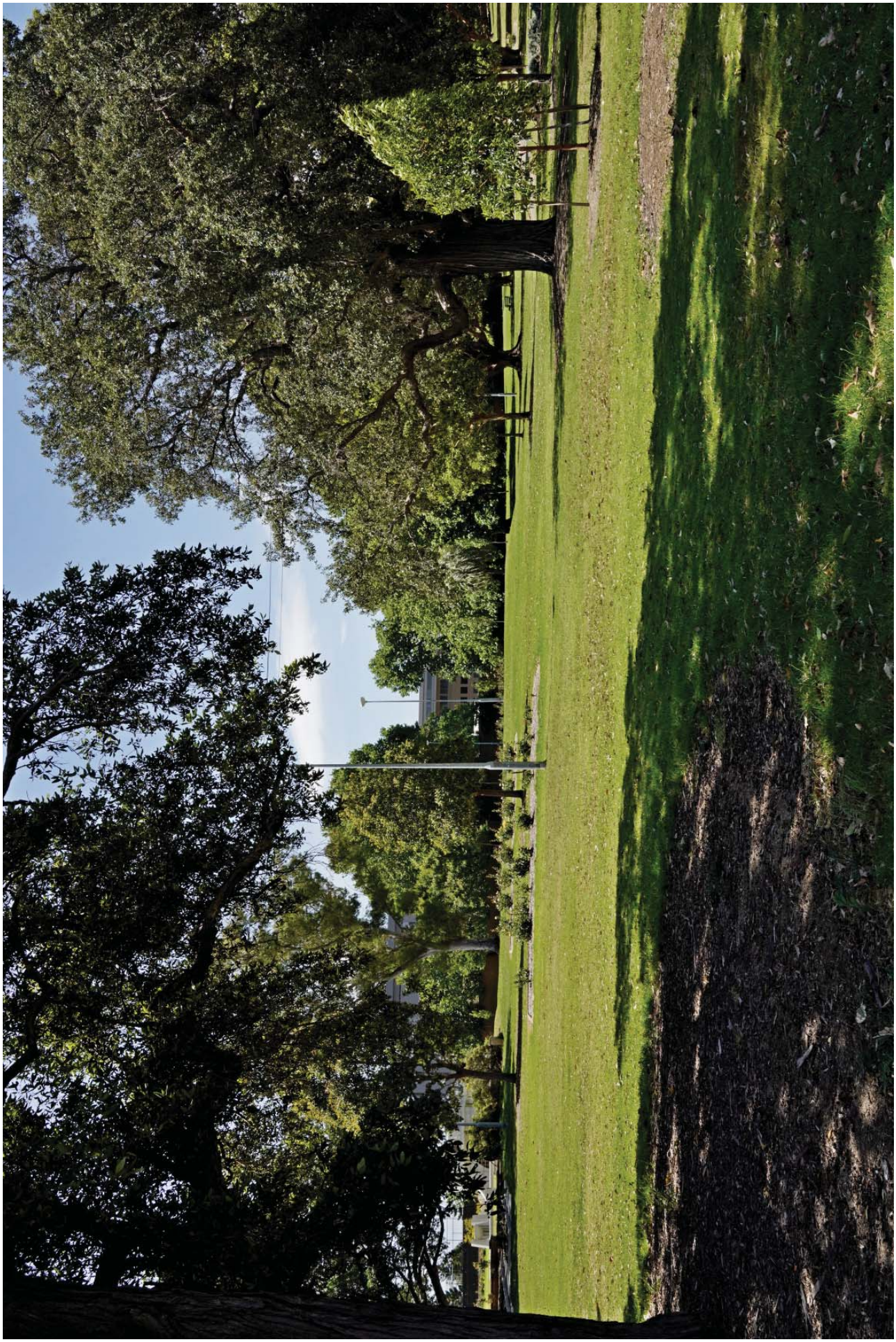
VP6 Photomontage

View north-east from the west side of Victoria Street at the Harland Street intersection



VP7 Photomontage

View north from the top of the western steps at Yeo Park



VP8 Photomontage

View north towards the school site from Yeo Park near Old Canterbury Road

VP9 Photomontage

View north-west from Prospect Road at the intersection of Prospect Road, Arlington Street and Old Canterbury Road

VP10 Photomontage

View along Hurlstone Avenue near the Prospect Road entrance to the School

VP15 Photomontage

View from balcony on the axis of the front door at 157 Victoria Road

View Place Data Sheet

Location 1	Public Domain	Viewing Distance		
Address/Location		>500m	500-100m	<100m
Victoria Square				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition		X		
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance		X		
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Public Domain	View Place amenity		X	
	Potential viewer numbers	X		

View Place Data Sheet

Location 2	Public Domain	Viewing Distance		
Address/Location		>500m	500-100m	<100m
Seaview Street and Victoria Street				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition		X		
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance		X		
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Public Domain	View Place amenity		X	
	Potential viewer numbers	X		

View Place Data Sheet

Location 3	Public Domain	Viewing Distance		
Address/Location		>500m	500-100m	<100m
Victoria Street near No 153				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition		X		
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance		X		
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Public Domain	View Place amenity		X	
	Potential viewer numbers	X		

View Place Data Sheet

Location 4	Public Domain	Viewing Distance		
Address/Location		>500m	500-100m	<100m
Victoria Street/Holwood Avenue intersection				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition		X		
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance		X		
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Public Domain	View Place amenity		X	
	Potential viewer numbers	X		

View Place Data Sheet

Location 5	Public Domain	Viewing Distance		
Address/Location		>500m	500-100m	<100m
View from near 175 Victoria Street				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition		X		
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance		X		
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Public Domain	View Place amenity		X	
	Potential viewer numbers	X		

View Place Data Sheet

Location 6	Public Domain	Viewing Distance		
Address/Location		>500m	500-100m	<100m
Victoria Street and Harland Street				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition		X		
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance		X		
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Public Domain	View Place amenity		X	
	Potential viewer numbers	X		

View Place Data Sheet

Location 7	Public Domain	Viewing Distance		
Address/Location	Image No.	>500m	500-100m	<100m
View from Yeo Park Steps				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition			X	
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance			X	
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Public Domain	View Place amenity			X
	Potential viewer numbers		X	

View Place Data Sheet

Location 8	Public Domain	Viewing Distance		
Address/Location	Image No.	>500m	500-100m	<100m
View from Yeo Park/ Old Canterbury Road				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition		X		
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance		X		
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Public Domain	View Place amenity		X	
	Potential viewer numbers	X		

View Place Data Sheet

Location 9	Public Domain	Viewing Distance		
Address/Location	Image No.	>500m	500-100m	<100m
Prospect Road/Arlington Street/Old Canterbury Road				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition		X		
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance		X		
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Public Domain	View Place amenity		X	
	Potential viewer numbers		X	

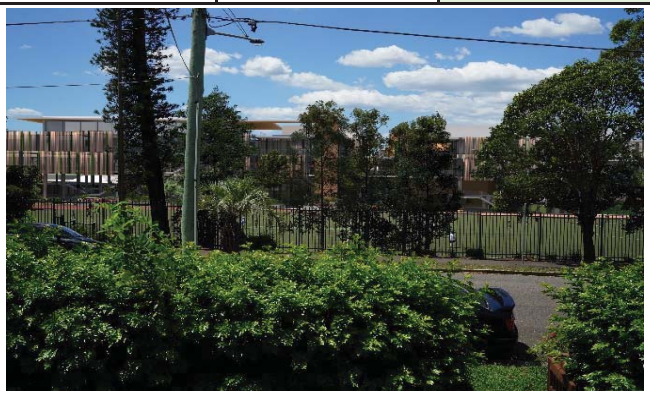
View Place Data Sheet

Location 10	Public Domain	Viewing Distance		
Address/Location		>500m	500-100m	<100m
Prospect Road/Hurlstone Avenue				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition		X		
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance		X		
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Public Domain	View Place amenity		X	
	Potential viewer numbers	X		

View Place Data Sheet

Location 15	Private Domain	Viewing Distance		
		>500m	500-100m	<100m
158 Victoria Street balcony on axis of front door				
Expansive	Restricted	Panoramic	Focal	Axial

Assessment and weighting factors		Ratings		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)
Base-line factors				
Effect On Visual Character of View		X		
Effect on Scenic Quality of View		X		
Variable factors				
Effect On View Composition		X		
Effect of Relative Viewing Level		X		
Effect of Viewing Period		X		
Effect of Viewing Distance		X		
View Loss or Blocking Effect		X		
Overall Extent of Visual Effect		Low		
Weighting factors				
Weighting Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)
Visual Absorption Capacity/Cumulative Impacts		X		
Compatibility with Urban Features		X		
Overall Extent of Visual Impact		Low		

View Place or Viewer Sensitivity				
		L	M	H
Private domain	Viewer amenity			X
	Potential viewer numbers	X		

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