Education Building

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Interior Palette

Illustrative Working Palette

BAR STUDIO

From GBA Heritage Report "The interior of the bulding was plainly finished: the reinforced concrete floors were covered with tallowwood flooring boards…". In keeping with the original materials of the building the new flooring in the rooms will be tallowwood

Sydney is defined by sandstone, it is "a kind of base note, an ever-present reminder of its Georgian beginnings and more ancient past." (Delia Falconer; Sydney, University of New South Wales Press, 2010) It was a favoured building material, particularly in public buildings, from the late 1790s to the 1890s.

As the dominant architectural material of the Education Building the existing Maroubra sandstone forms the foundation of the materials palette. Each of the materials in the palette will be considered in relation to the sandstone.

During the 20th century the Education Department ran its own factory to produce furniture for public schools. Desks and other furniture were often made from light timbers such as pine and silky oak. The lightness of these timbers could be echoed in the use of a timber veneer throughout the rooms, the selection of which will be developed during the design process.

In the late 19th and early 20th centuries, the quarrying of Mittagong's Mount Gibraltar in the New South Wales Southern Highlands – known locally as 'The Gib' – yielded thousands of cubic metres of this highly durable stone. Although very hard to work, trachyte had strength, a very fine grain and took a beautiful polish, being dark olive green or grey, occasionally streaked with narrow veins of glassy quartz. It was without cracks or flaws and blocks of almost any size could be obtained.

It was used firstly for kerbs and gutters locally and in Sydney and then adopted by builders and architects in myriad small and large scale projects throughout NSW and beyond.

Although Trachyte is no longer available, a similar stone that depicts the colour and texture of the Trachyte, will be featured on the guestroom winter garden flooring. It will be installed in a similar checkerboard pattern to the Lands Building loggia but will be a subtle adaptation in variation of finish such as polished and honed.

TALLOWWOOD

EXISTING SANDSTONE

LIGHT TIMBER

TRACHYTE

Education Building

Interior Palette

Illustrative Working Palette

BAR STUDIO

Timber wainscots are a feature of the Ministerial Boardroom in the Education Building, a room of high prestige. A modern interpretation of the wainscot lends itself to wall panels and head board in the guestroom. Similar simplified timber panelling was also used as partition dividers within the Lands & Education Buildings.

Learning from their experience in India, the British colonists discovered that wicker furniture was an intelligent response to a demanding climate. Wicker furniture was introduced to Australia in the 19th century and its use stands as both a nod to the colonial aspirations of the empire and an understanding of climate.

The industrialised production of printed wallpapers during the Victorian era made them an increasingly popular decorative component of the rich interiors of the time. While wallpaper was not used in the Education Building, the narrative possibilities of pattern evinced by this decorative element will be translated into customised toile wallcoverings, used as lining for furniture pieces and insertions in the room. These will be printed with a collaborative artwork by Australian graphic designers, artists and illustrators.

The design will be created by using references to Indigenous and imported flora and fauna - bringing the outside world inside - evoking 19th century chinoiserie designs, with a 21st century twist.

The Education Building was constructed at a time of massive modernisation. Although electricity was not introduced to Sydney until 1904, it was being used in 1879 to assist the construction of the Garden Palace Exhibition Buildings in the botanical gardens. Around the world many industries were being revolutionised by industrial processes. Railways, telegraphs and telephones were changing the way people interacted and communicated, structures were changing from masonry to steel frames. The industrial production of metals allowed for a critical shift in the modernisation of the city.

The accent metal used within the guest rooms for trims, details, accessories & sanitary-ware will be an aged, dark patina, selected to complement and stand alone from the existing metals.

WAINSCOTTING / PANELLING

WICKER

CUSTOM TOILE

DARK BRONZE METAL

Education Building

—

Interior Palette

Illustrative Working Palette

BAR STUDIO

The Education Building utilises decorative marbles from both local and imported sources. Imported marbles were used for flooring and decorative wall panelling and surrounds, sourced from local quarries. This use of marble attests to the aspirations of the building.

While existing stonework will be retained and restored, new feature stones will be used in the Education Building to continue this narrative of imported and decorative marble.

Glass production was one of South Sydney's main industries in the late 19th century. A number of glass-works were established at Redfern, Alexandria and Waterloo to manufacture glass jars and bottles for domestic and industrial use. In 1926, Crown Crystal Glass (a subsidiary company of Australian Glass Manufacturers) was formed to produce crystal as well as cut, pressed and blown glassware for both households and industry.

The industrial hub of these southern suburbs attracted workers, and Australian Glass Manufacturers on South Dowling Street at Waterloo notably employed Aboriginal people, particularly women. The use of glass elements can trace a link to this story of integration and industrialisation.

The Departments of Education and Agriculture were 20th-century buildings and their planning and construction reflect some of the shifts from the Victorian to the modernist period in terms of both organisational thinking and architectural design. Amongst these shifts was a move away from strictly hierarchical interior layouts, underpinned by ornament and heavy decoration – as typified by the Department of Lands building – to functional spaces, with expressed structures and simple, pragmatic details. This forward-thinking, contemporary attitude will be expressed in the fresh and neutral palette of paint colours for the Departments of Education and Agriculture buildings.

CALACATTA

GLASS

PAINT

Education Building
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Interior Guiding Principles
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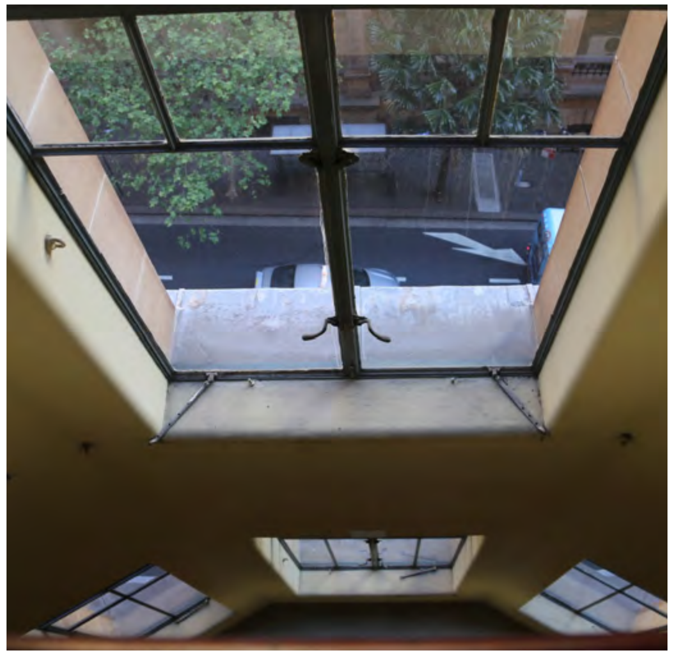


Inside vs Outside

- A balance in internal and external spaces, evoking the spirit of Sydney's indoor/outdoor lifestyle.
- Guestroom 'wintergardens' echo the heirachy of external loggias and internal spaces in the Department of Lands - but in a localised response.

Sense of Place

- Design response is grounded in the local environment - geological, urban, community - bringing guests and the local together.
- Materials and details engage with the local environment and lifestyle - light, airy, free.

Beyond Hierarchy

- The Departments of Education and Agriculture maintained an external appearance of dignity and durability, pairing with the Department of Lands to create a precinct of Government authority. Internally the building tells a different story.
- Interiors of the Department of Education and Agriculture are open plan and functional. There is no hierarchy of order.
- Guestroom layouts reflect the functional planning of the original building - consistent and systematic planning.

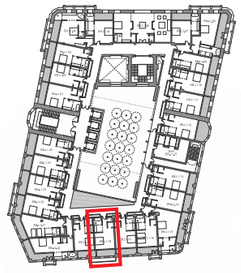
Open and Engaging

- Although the building exterior is sandstone, the structure is steel - new technologies were engaged to support the classical exterior.
- Interiors will embrace the open and engaging spaces made possible by contemporary technologies.

Education Building

King Room (EB-L1-18)

Illustrative



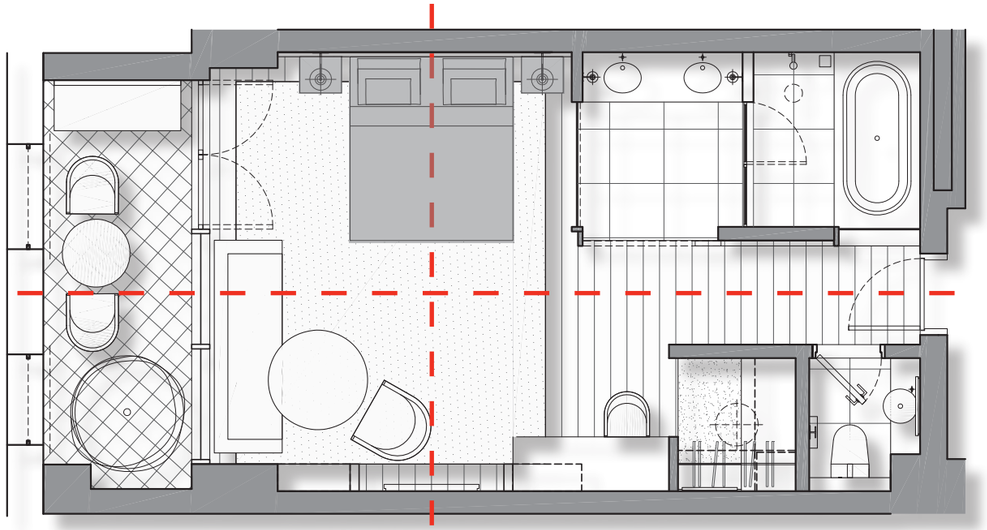
KING ROOM -Existing heritage fabric within the wintergarden

Education Building

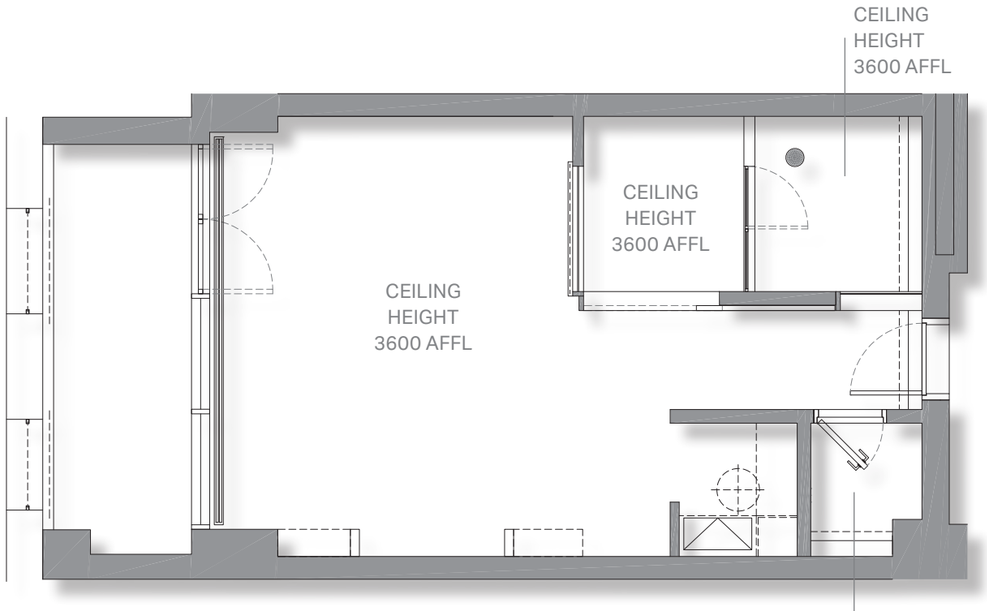
King Room (EB-L1-18)

Illustrative

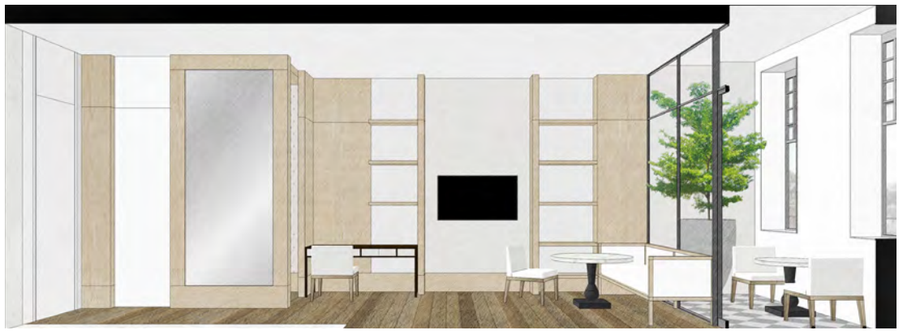
BAR STUDIO

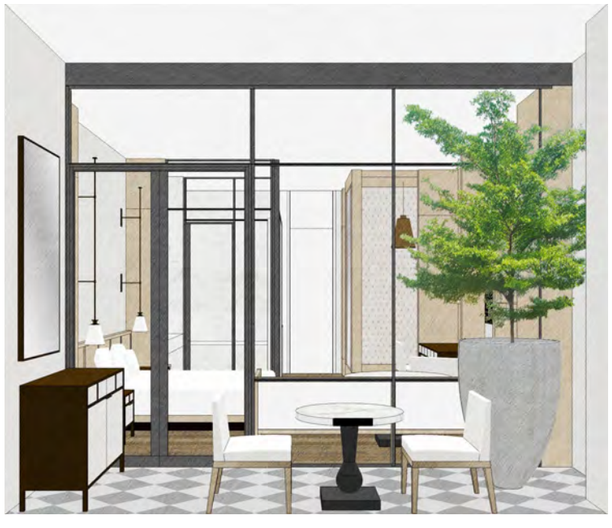


EDUCATION - King Room -PROPOSED PLAN



EDUCATION - King Room - REFLECTED CEILING PLAN





Education Building

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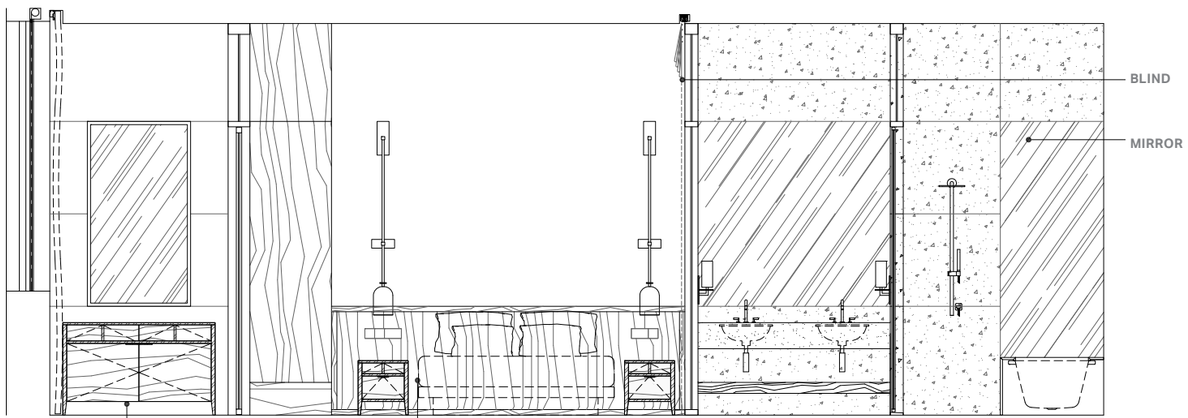
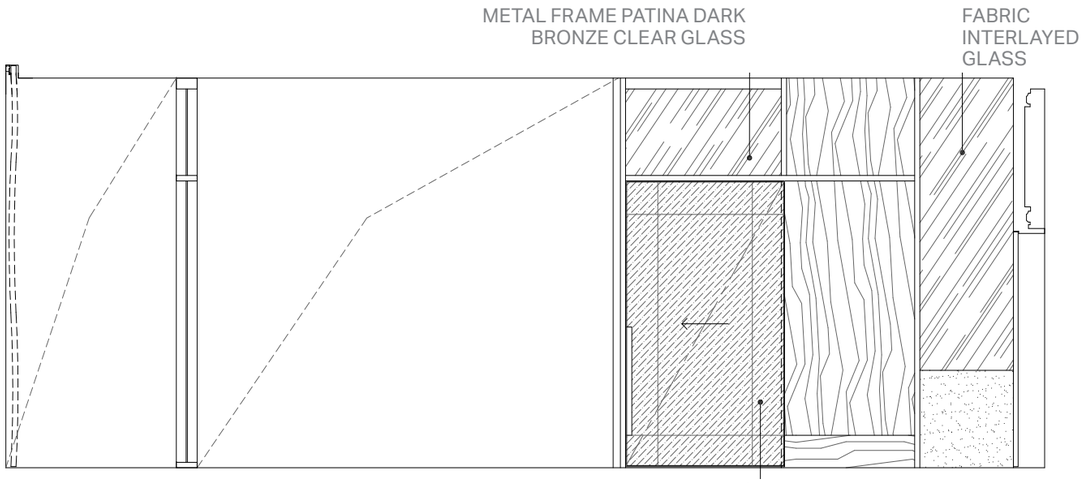
King Room (EB-L1-18)- ELEVATIONS

Illustrative

BAR STUDIO



ELEVATION A



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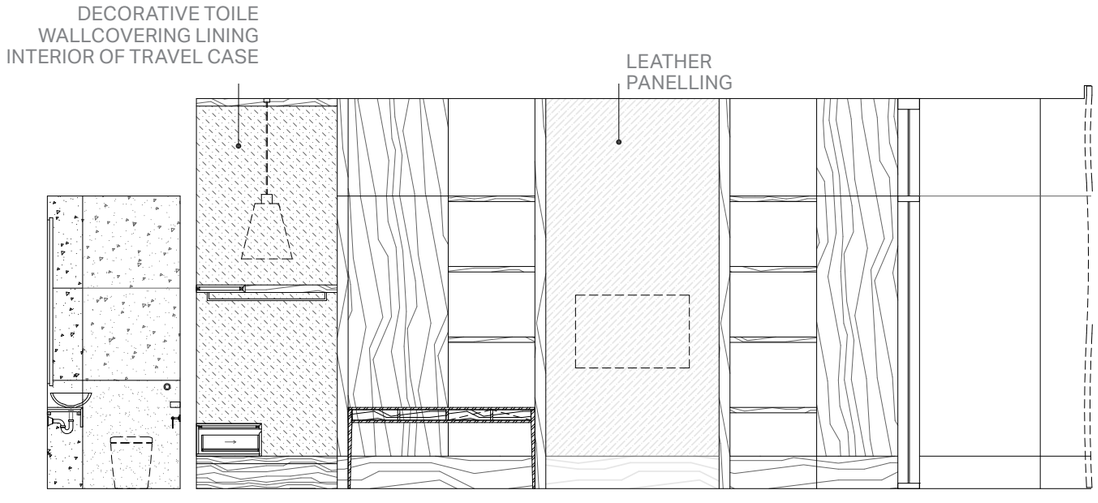
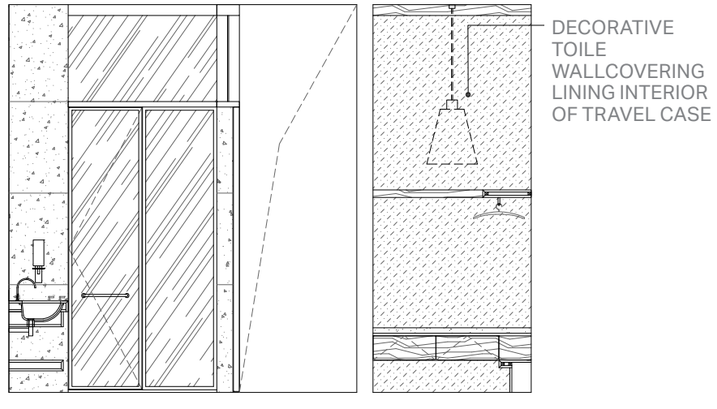
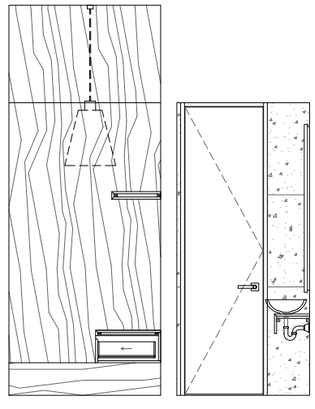


ELEVATION B



ELEVATION D



EB-K3A - ELEVATION E

Education Building

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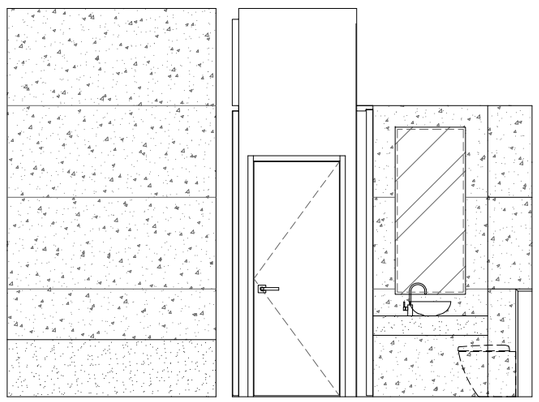
King Room (EB-L1-18)- ELEVATIONS

Illustrative

BAR STUDIO



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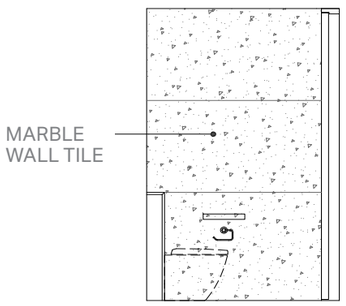

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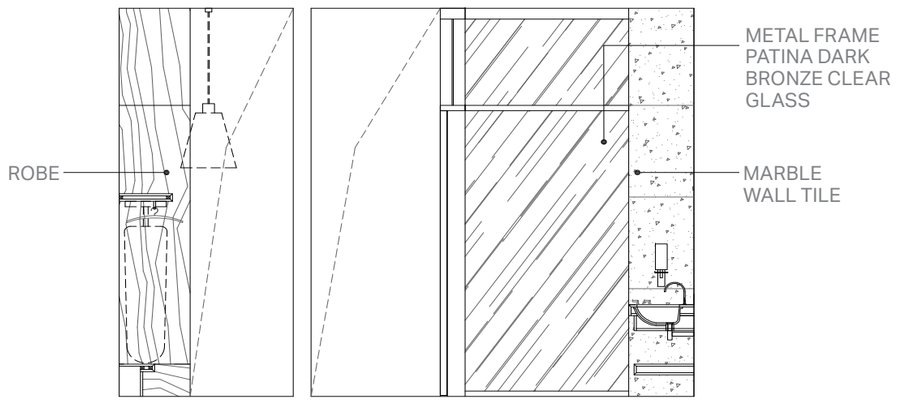

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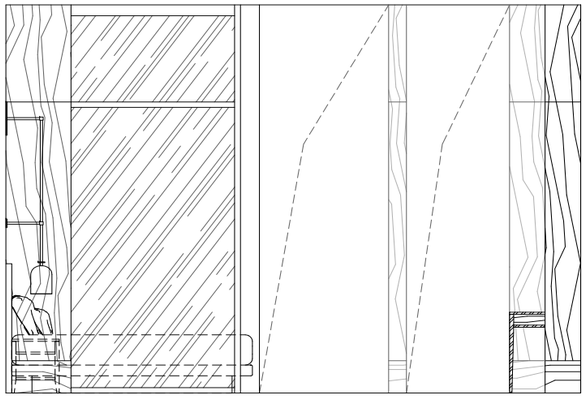

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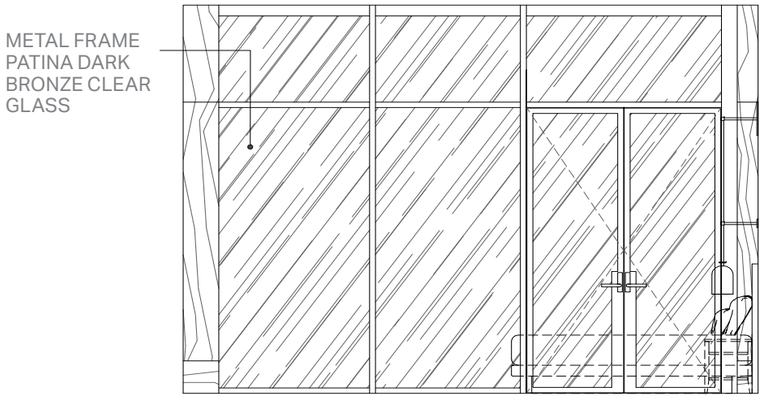

ELEVATION K

Education Building

King Room (EB-L1-18)

Illustrative

BAR STUDIO

Education Building

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King Room (EB-L1-18)

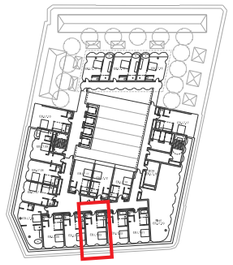
Illustrative

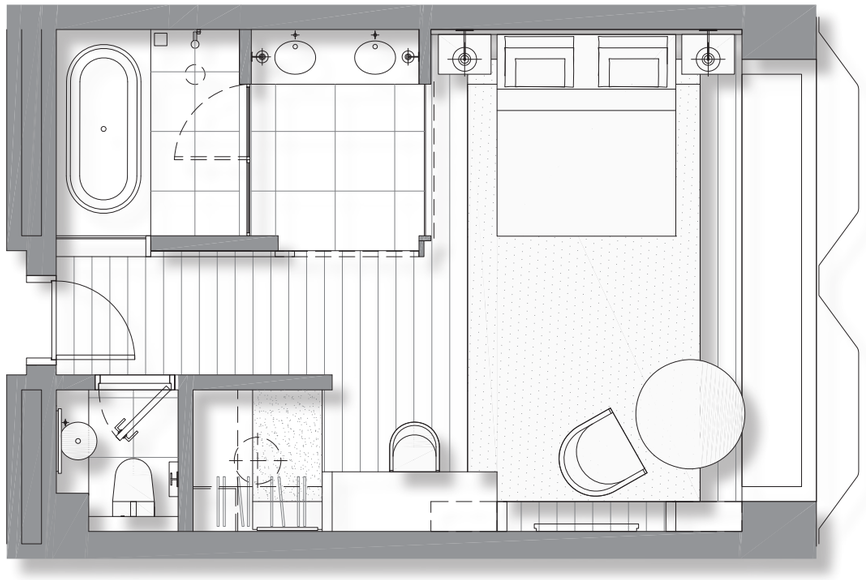
BAR STUDIO

Education Building

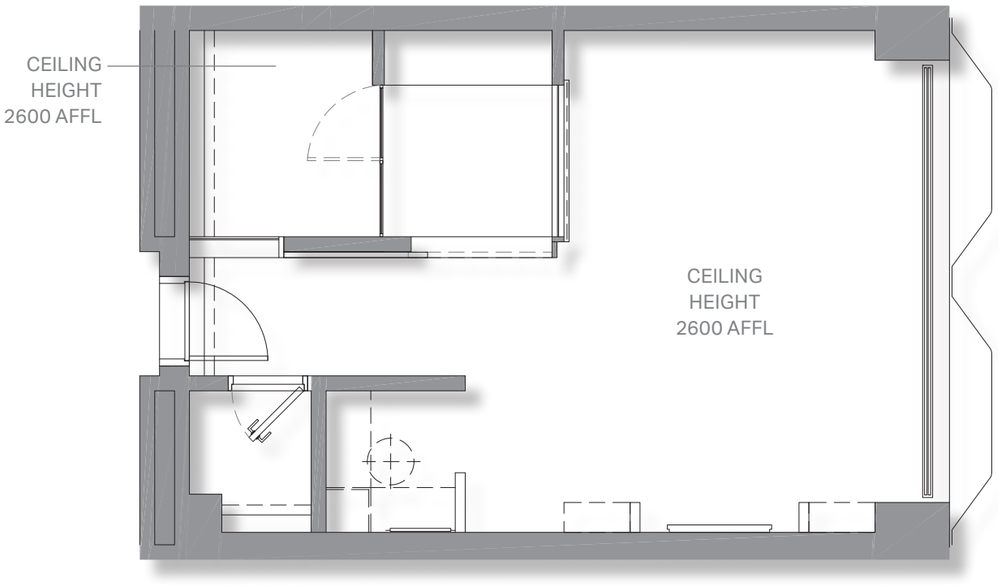
Extension King Room (EB-L07-03)

Illustrative

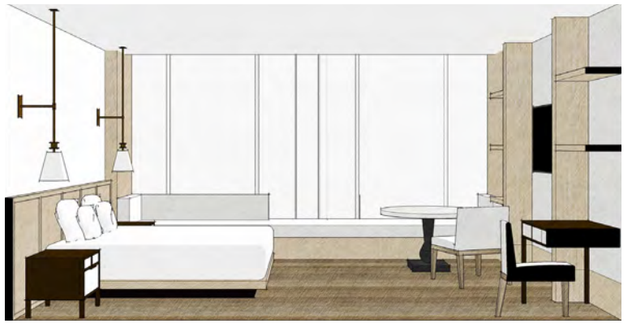




EDUCATION - King Room Extension Floors - PLAN



EDUCATION - King Room Extension Floors - REFLECTED CEILING PLAN



Extension King Room (EB-L07-03)

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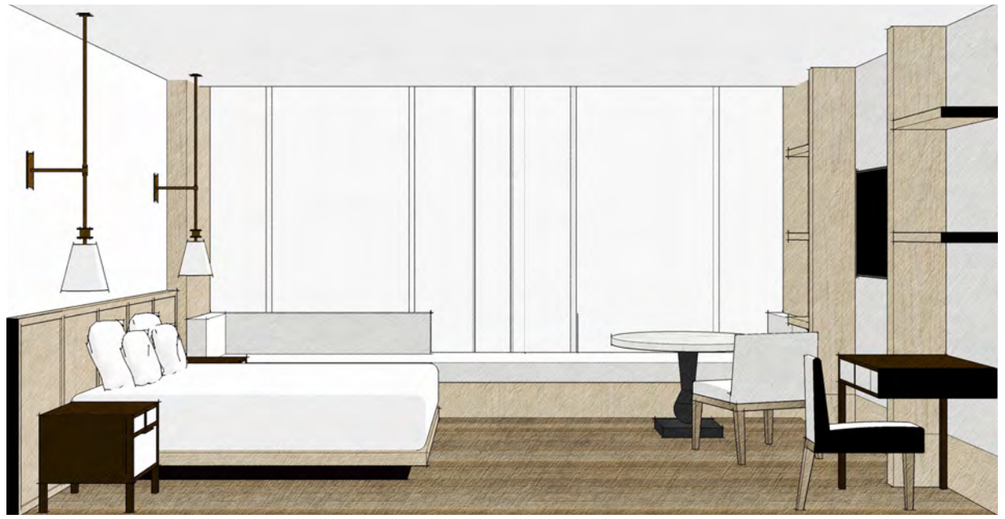
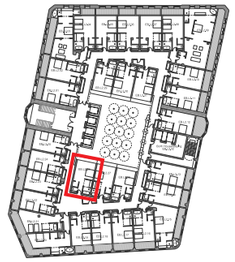


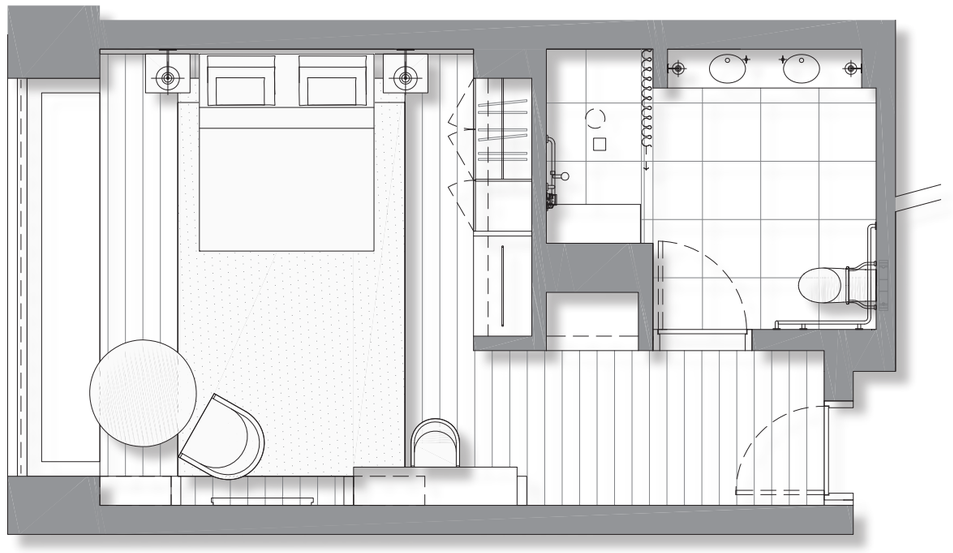
Education Building

BAR STUDIO

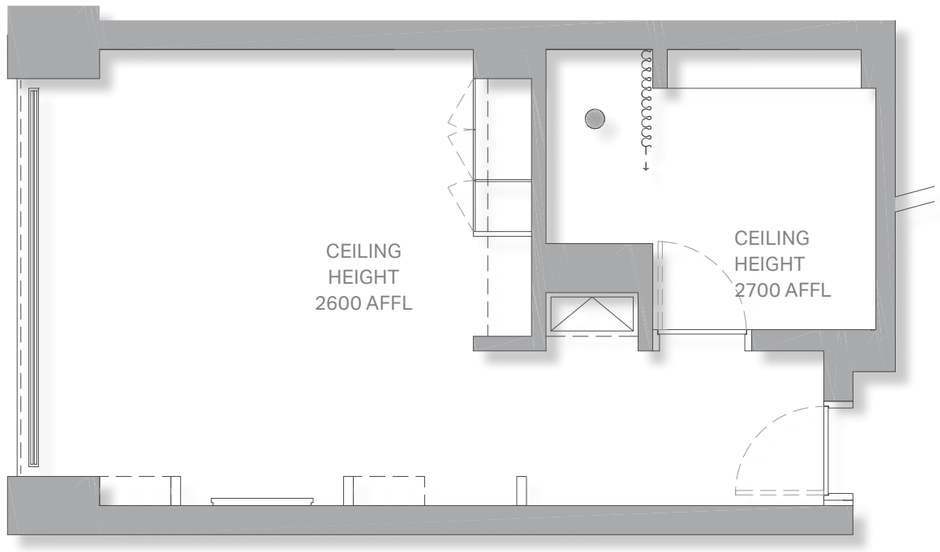
Accessible King Room (EB-L02-26)

Illustrative





EDUCATION - King Accessible Room -PLAN



EDUCATION - King Accessible Room - REFLECTED CEILING PLAN

The Sandstone Precinct

Appendix 02
Lighting design

Produced by Point of View

Sandstone Hotel Lighting Design

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Heritage Impact

1. Visual impact

a. Size and appearance
Selection of luminaires will consider the physical size, amongst a number of other parameters, depending on the light effect required. Small slimline luminaires will be proposed where possible.

b. Concealment
Where possible fixtures will be mounted and concealed , partially or fully, by existing ledges and architectural details. Where this is not possible the colour of the fixture and the glare control from the fixture will be specified to minimise visual impact both day and night.

c. Colour
We would recommend a bronze finish to the fixtures which is softer and more sympathetic in relation to the sandstone over and above black or beige

d. Colour Temperature
The colour temperature of the lighting will be appropriate to the material. Wherever possible a consistent LED source will be used across the project. Variations in colour temperature can be deliberately used to enhance differences in materiality or purpose.

d. Cable reticulation
Specifics will need to be discussed in coordination with electrical contractors and electrical engineers, however we will propose Mims cable as a possibility, which can be moulded to suit detailed stonework and weathers to be hidden from view

e. Transformers and control gear
This equipment will be housed inside the building to minimise visual interruption.

2. Physical impact

a. Mounting locations
Where possible, luminaires will be fixed to vertical surfaces to reduce penetrations to horizontal surfaces

b. Fixing Points
Fixing to the façade will be a necessity to enable the illumination and celebration of these facades at night. To minimise the impact on the fabric of the building fixing points will be focussed where possible at grout or joint lines. Any fixing points directly in to stone will be specified to be treated to eliminate water ingress and possible degradation to the stone cause by this.

c. Materials
Fixings will be specified as stainless steel to avoid rusting preventing colouring stone and expansion cracking caused by rusting of fixings.

d. Cable reticulation
The principle will be to minimise penetrations, reticulating cable on ledges will be a preference. Information to be detailed in coordination with electrical engineers and contractors.

Lessons Learnt and Lighting Parameters

Lessons Learnt

1. Local wildlife
Cockatoos have chewed through some cabling on building facades. Protecting cables in suitable conduits or specification of cable to be considered

2. Water Ingress
Water can penetrate fixtures through ‘wicking’ and leaching through cables. Each entry and exit point of cables to junction boxes (even if they have IP65 glands) should be silicone around the cable sheath

3. The Elements
Suitable lightning protection to the building is essential to reduce impact on electronic lighting equipment.

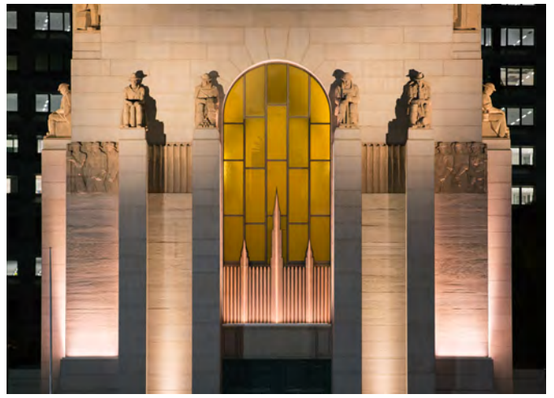
4. Colour Temperature Matching
Luminaires claiming the same colour temperature have proved to be inconsistent in their colour appearance and rendering of the same material. Comparisons between different luminaire is essential for a consistent result.

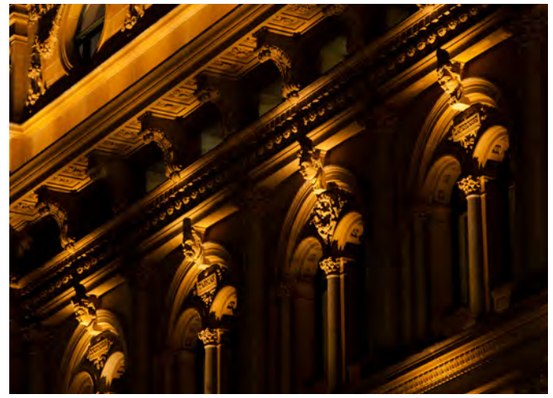
Lighting Parameters

1. Australian Standards
Compliance with AS4282, obtrusive light. Ensure minimised direct light spill/pollution through focussing lighting appropriately to building and landscaping surfaces.
Compliance with AS1158 for pedestrian lighting categories for Farrer Place. P8 category has been selected in accordance with COS and AS requirements

2. City Of Sydney Public Domain Design Codes
Reference to the City of Sydney Lighting Design Guidelines with an aim to:-

a. Promoting safety
b. Promoting sustainability
c. Respect distinctiveness and sense of place
d. Enhancement of public spaces and public life
e. Lighting to buildings of significance and of heritage nature





Sandstone Hotel Lighting Design

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Equipment typology

1. Summary of parameters for lighting equipment covering

a. Lighting technology
Best practice lighting technology will be used to ensure long life, fit-for purpose and low energy (eg LED technology).

b. Efficacy
Exterior luminaires will have a minimum efficacy of 60 lm/W, in line with NCC requirements

c. Control
The lighting will be effectively controlled for visual, usage and energy saving purposes. Luminaires will be grouped and programmed into scenes to allow for manual or automated dimming/switching. Visual lighting scenes will be programmed into a control scheme to create lighting effects that may vary depending on user density, time of night or special events.

d. Dimmability
Dimmable lighting will be used on facades to allow for reduced, energy saving light levels late at night.

e. Light Distribution and Beam Control
Luminaires with suitable optical distribution will be specified to ensure light is directed only to where it is required; minimising any spill light and maximising efficiency. Appropriate luminaire accessories such as glare shields, baffles and lenses may be used to further control the light.

f. Lumen depreciation and Life
Luminaires specified will have LED sources with a minimum lumen maintenance value of L80 B10 at 50,000hrs. This means that at 50,000hrs of operation, 90% of the luminaires will achieve at least 80% of their original lumen output.

g. Colour temperature
The colour temperature of the lighting will be appropriate to the material. Wherever possible a consistent LED source will be used across the project Variations in colour temperature can be deliberately used to enhance differences in materiality or purpose.

h. Colour Appearance
Luminaires claiming the same colour temperature will be checked against each other to ensure consistency in the colour appearance of light.

i. Colour Rendering
The colour rendering characteristics of light sources throughout the project will be minimum or CRI 85, in order to accurately represent materials and finishes.

j. IP rating
Denotes the ability of a luminaire or enclosure to protect internal parts from the outside environment. All exterior luminaires uplighting will be protected to IP67, and downlighting will be protected to IP65 or greater. Lighting submersed in water will be protected to IP68.

k. Corrosion resistance
Due to the close proximity of the project to the harbour, corrosion resistance is particularly relevant in luminaire selection.

l. IK Rating
Denotes the degree of a protection by enclosures for electrical equipment against external mechanical impacts in accordance with IEC 62262:2002 and IEC 60068-2-75:1997. All luminaires are to be certified to an appropriate degree of protection. The mounting height of luminaires is to be considered for public access to minimise the opportunity for vandalism.

m. Control gear
Where required, luminaire drivers must be located in accessible locations with appropriate protection and ventilation.

n. Warranty
All luminaires must be supplied with a 5 year manufacturer warranty.

2. Luminaire typologies

a. Uplighting
b. Accent lighting
c. Grazing lights
d. Linear lighting

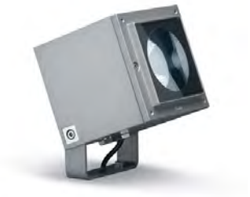
Fixture Palette

1. Façade in-ground uplight
2. Linear LED projector high power
3. Small accent light
4. Large accent light
5. Linear LED projector
6. Linear LED

1.

2.

3.



4.

5.

6.

Sandstone Hotel Lighting Design

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Design Approach

1. Education Building Façade General Approach

a. Warm white colour temperatures will be used to the lower heritage section of the building to enhance the sandstone finishes. Linear lighting will wash up large planar surfaces providing a foundation layer of light, with accent lighting precisely aimed at architectural details including columns, cornices and scrolls to enhance the composition and form of the building. The warm white colour temperature to the original building is to be juxtaposed by lighting of a cooler colour temperature to the new rooftop extension. A subtle glow to the awning and upper canopy will provide a capping to the scheme.

b. Key design elements

i. **Rusticated podium**
- Ground recessed uplights to enhance entry portal
- In ground uplights to illuminate the rusticated sandstone façade, providing reflected light to the public space

ii. **Columns**
- Low profile linear LED projectors to accent main columns with planer lighting approach

iii. **Balustrade**
- Surface mounted accent lights to underside of balcony
- Linear LED to uplight Balustrade

iv. **Cornice**
- Spot lights mounted to top side of balcony to illuminate decorative carvings on façade
- Linear LED mounted to top side of ledge to uplight cornice
- Linear projector LED mounted to top side of ledge to uplight façade and indirectly illuminate upper cornice. Stop and start in between windows to limit light spill to guestroom
-

v. **Scrolls**
- Linear LED mounted on ledge to uplight scrolls
- Cooler colour temperature to new façade – 4000K
- Surface mounted uplights to new glazed façade.

vi. **New Extension**
- Uplights to illuminate façade cladding in between glazing
- Integrated linear LED to nose of canopy, washing consistent light
- Reflected lighting, projecting water ripple to underside of upper canopy. Angles of reflection calculated to avoid spill light

Examples of fixing locations:

Uplighting to Balustrade

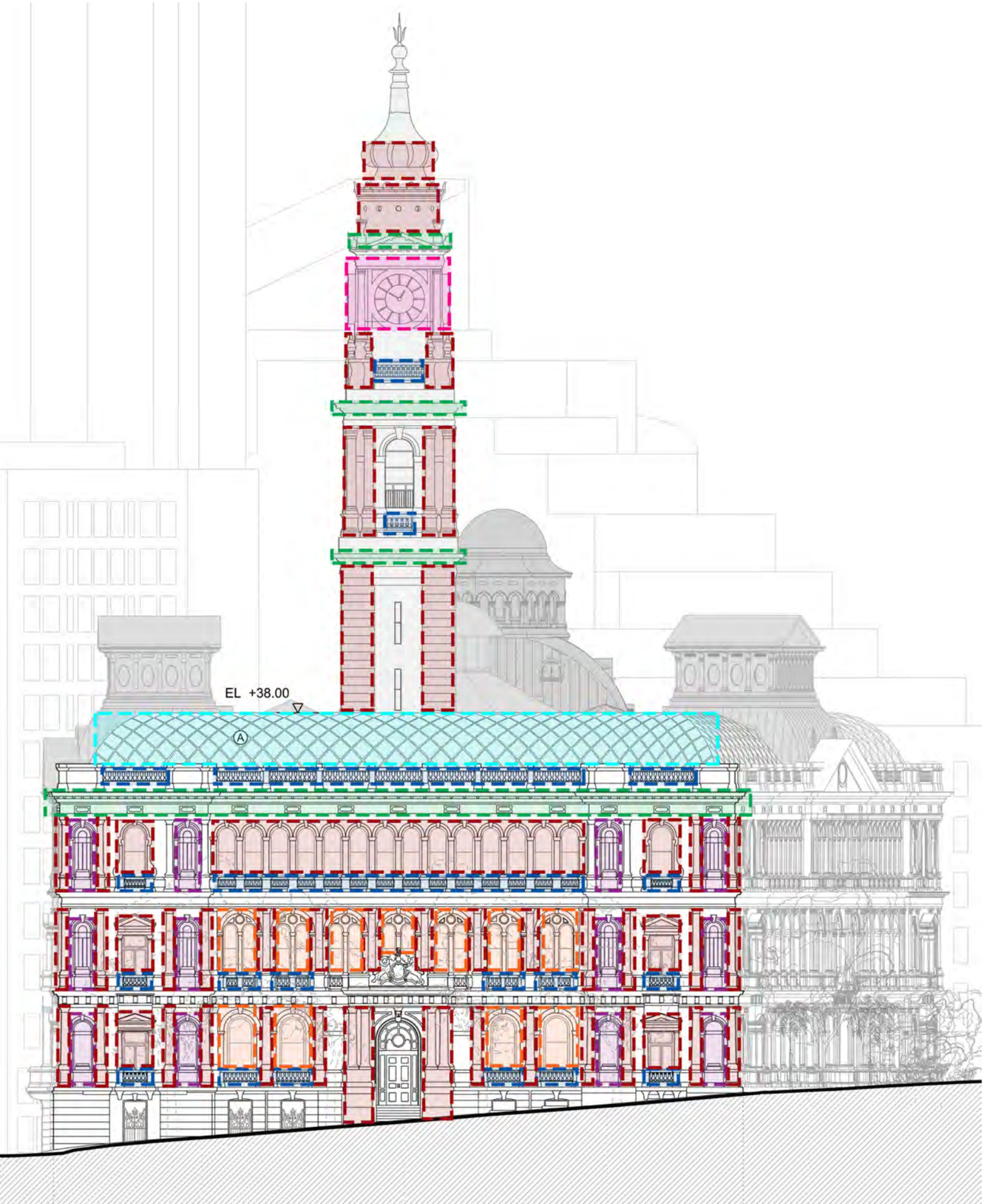
Uplighting to Cornice

Accent to Balcony underside

Uplighting to Columns

Sandstone Hotel Lighting Design

Design Approach



2. Lands Building Façade General Approach

a. The ornate and decorative details and motifs adorning the Lands Building will be accentuated using precisely aimed and controlled lighting. Consistent, repetative uplighting to arches will aid in defining the building's rhythm and facade apertures. Lighting within the colonnades and statuette niches draws the eye in and reveals the depth of the building. Linear lighting to the friezes will assist in delineating the lower and upper sections of the building. Uplighting integrated to the clock tower facias enhances its verticality and acknowledges the historical significance of the building. Warm white colour temperatures will be used to enhance and celebrate the Pyrmont sandstone, while the Verdigris of the copper rooftops will be emphasized with a cooler white colour temperature.

b. Key design elements:

i. **Sculpture niches**
- » Uplighting inside sculpture niches
- » Uplighting to face of existing sculptures

ii. **Columns**
- » Uplighting to column faces to major windows

iii. **Balustrade**
- » Lighting to balusters

iv. **Colonnade and arches**
- » Uplighting to underside of arches from spotlights mounted to ledges

v. **Cornice**
- » Linear LED mounted to top side of ledge to uplight cornice

vi. **New roof structure**
- » Cool white illumination to roof structure
- » Linear LED to frieze, mounted to top face of ledge
- » Low profile linear LED projectors to accent upper façade

vii. **Clock tower**
- » Low profile linear LED projectors to accent main clock face facade with planer lighting approach, spill light to cornice
- » Uplighting to columns and arches at mid level of the tower
- » Linear LED to wash underside of tower cap
- » Backlit clock fascia
- » Cooler white to tower dome to accentuate change in materiality

Examples of fixing locations:

Uplighting to Cornice

Uplighting to Balustrade

Uplighting to Sculpture niches

Colonnade and arches

Appendix 03 Visual Impact Statement

Produced by Make

The Sandstone Buildings
–
Visual Impact Statement

Introduction

Make have been engaged by Pontiac Land Group on the proposed re-use of the former Lands Department and Education Department Buildings, at 23-33 and 35-39 Bridge Street, Sydney.

This Visual Impact Assessment has been prepared in support of the Stage 2 State Significant Development Application for the Sandstone Precinct.

This Report should be read in conjunction with the full submission dcoumentation, including the Architectural Plans, Environmental Assessment and Heritage Impact Assessment.

Assessment Process

- Architectural drawings and survey data have been used to prepare a 3D CAD model of the site and proposed volume.
- Photomontages have been prepared to match the various key views, and align with the Stage 1 submission.
- Each of the views shows three conditions

1. The existing buildings;
2. The Stage 1 Section 96 massing envelope; and,
3. The proposed Stage 2 design.

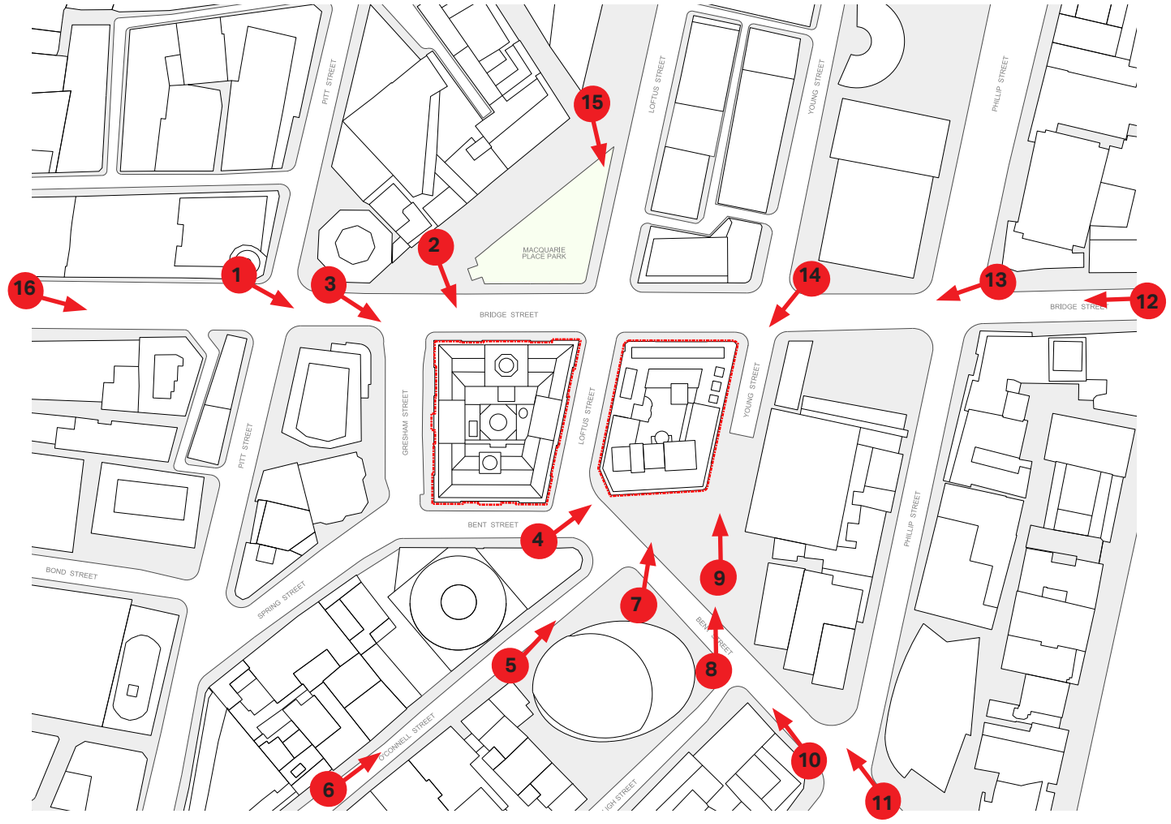
- To ensure consistency, the original Stage 1 Development Application photography has been retained and reused for this assessment.
- The base photographs were taken in October 2014 with a Canon EOS 5D Mark III, with a lens focal length of 17mm.
- This data has been used to match the 3D camera settings and view points.
- The work has been undertaken by Doug and Wolf of Sydney.

EIS requirements

3. Built form, Urban design and Public domain
The EIS shall

- Demonstrate the design excellence process for the additional built form above the Education Building and how this exhibits a high architectural and design quality, including:
  - Being setback and articulated to maintain the visual prominence of the existing building and presenting as a contemporary projection to it;
  - Reflecting the legibility of the building's composition, architectural style, form and features, such as the light well;
  - Using materials and detailing that respects and is subservient to the heritage sandstone facades; and,
  - Reflecting the heritage significance of the site, endorsed Conservation Management Plan and Stage 1 Concept Approval.

- Provide a Visual Impact Assessment of the proposed addition to the Eductaion Building, including before and after photomontages and perspectives for each elevation, showing:
  - Elements and views of the proposal from key locations, vistas and view corridors from the public domain and residential buildings that may be impacted; and,
  - An assessment of the view impacts and design considerations to mitigate any impacts.



Key views

This statement uses the same views and photography from the approved Stage 1 Development Application. These are set out below :

1. Corner of Pitt and Bridge Streets (A)
2. Corner of Gresham and Bridge Streets
1. Corner of Pitt and Bridge Streets (B)
2. Bent Street
3. O'Connell Street
4. O'Connell Street
5. Corner of O'Connell and Bent Streets
6. Corner of Bligh and Bent Streets
7. Farrer Place
8. Corner of Phillip and Bent Streets
9. Corner of Macquarie and Bent Streets (State Library corner)
10. Macquarie Street near Conservatorium of Music
11. Corner of Phillip and Bridge Streets
12. Corner of Young and Bridge Streets
13. Corner of Loftus Street and Reiby Place
14. Bridge Street

View 01

–

Corner of Pitt and Bridge Streets (A)

Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals

View 02

Corner of Gresham and Bridge Streets

Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals

View 03

–

Corner of Pitt and Bridge Streets (B)

Existing

Stage 1 (Amended Section 96)

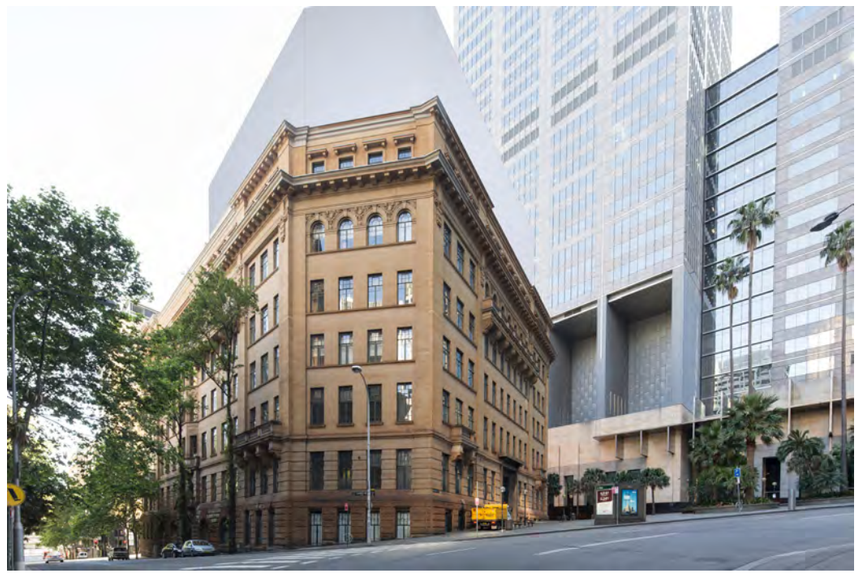
Stage 2 Proposals

View 04

–

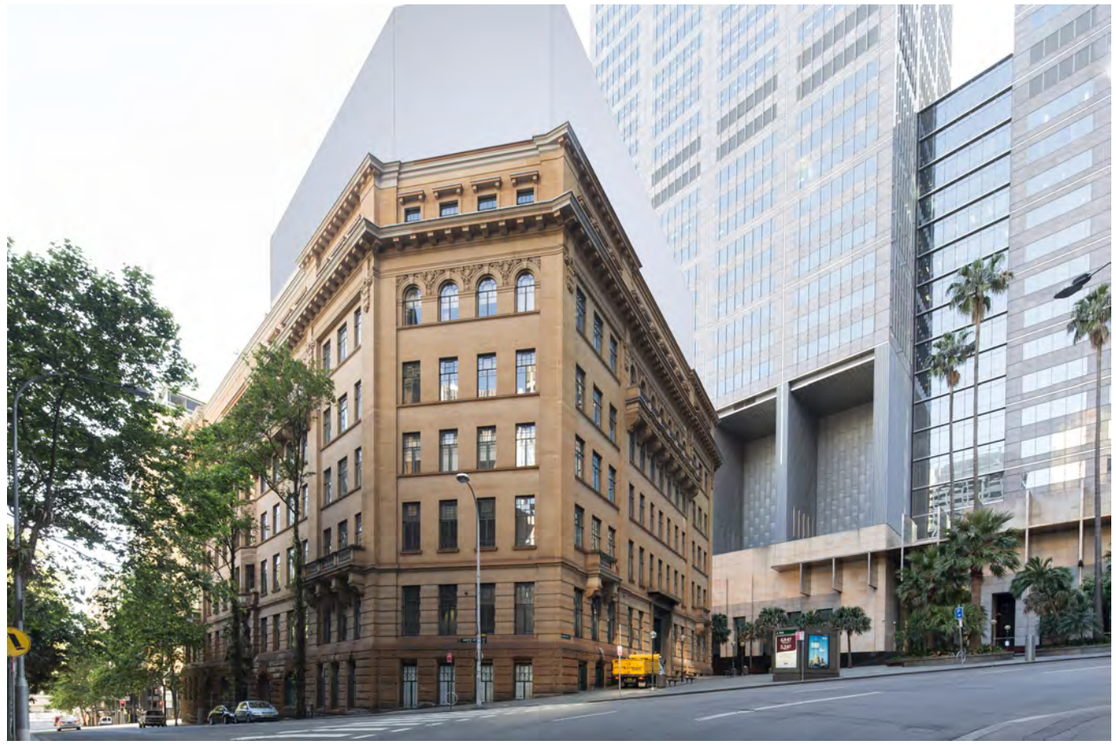
Corner of Loftus and Bent Streets

Existing



Stage 1 (Amended Section 96)

Stage 2 Proposals



Stage 1 (Amended Section 96)

Stage 2 Proposals

View 05

–

O'Connell Street (A)

Existing

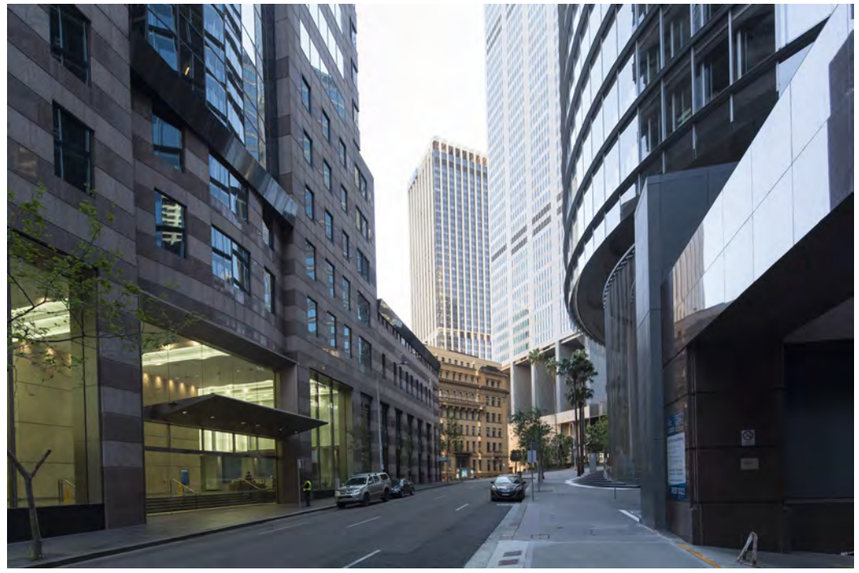
Stage 1 (Amended Section 96)

Stage 2 Proposals

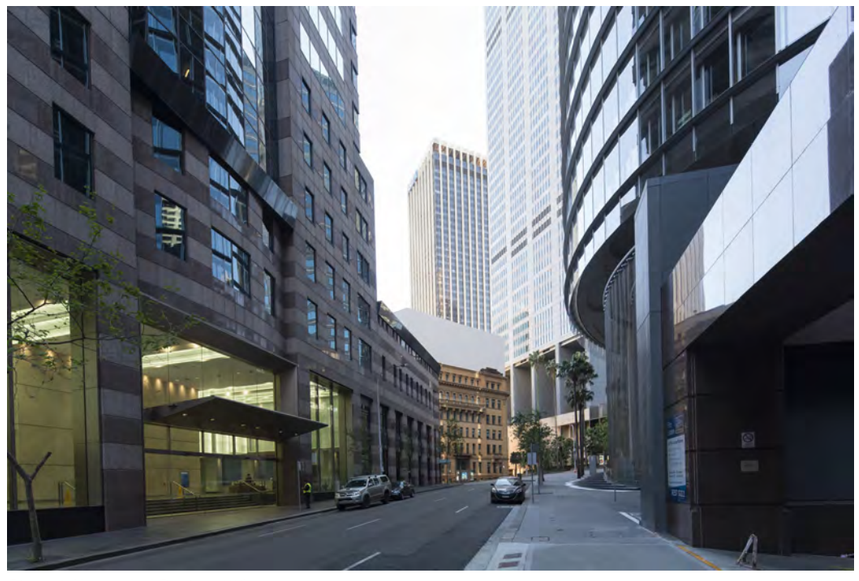
View 06

–

O'Connell Street (B)



Existing



Stage 1 (Amended Section 96)

Stage 2 Proposals

View 07

–

Corner of O'Connell and Bent Streets

Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals

View 08

Corner of Bligh and Bent Streets

Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals

View 09

–

Corner of Bent and Young Streets

Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals

Stage 1 (Amended Section 96)

Stage 2 Proposals

View 10

–

Corner of Phillip and Bent Streets

Existing

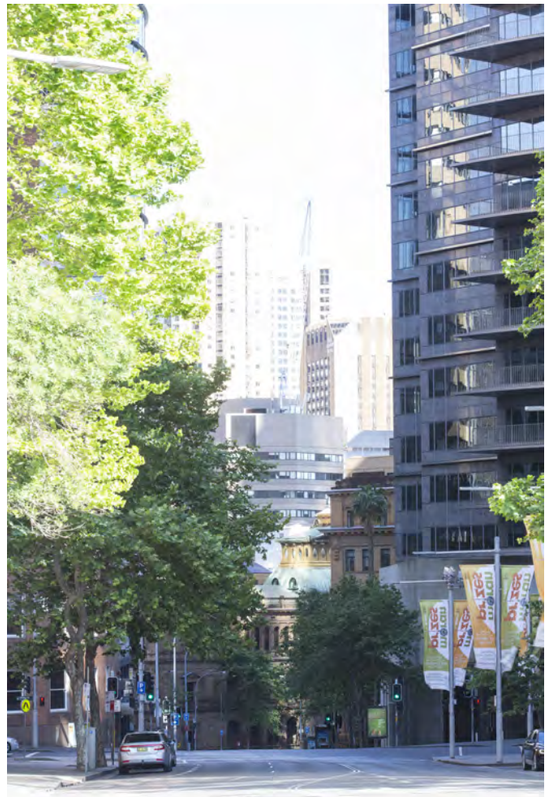
Stage 1 (Amended Section 96)

Stage 2 Proposals

View 11

–

Corner of Macquarie and Bent Streets
State Library



Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals

View 12

–

Corner of Macquarie and Bridge Streets
Near Conservatorium of Music

Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals

View 13

–

Corner of Phillip and Bridge Streets
Museum of Sydney

Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals

View 14

–

Corner of Young and Bridge Streets

Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals

View 15

–

Corner of Loftus Street and Reiby Place

Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals

View 16

Corner of George and Bridge Streets

Existing

Stage 1 (Amended Section 96)

Stage 2 Proposals