

Figure 36 – Proposed works at the corner of Union and Pymont Streets – Level 00 and Level 01

4.10 SELS BUILDING FORECOURT

Mod 14 proposed the demolition of the existing fit out of the SELS Building. However, no change of use was sought to the existing ground floor retail tenancy.

Under Mod 13, it is proposed to continue the current use of the SELS building and not progress with the demolition of the internal fit-out as proposed under Mod 14.

Mod 13 includes the levelling of the northern external area adjacent to the SELS building to create a SELS plaza on the corner of Pymont Street and Jones Bay Road.

4.11 SIGNAGE WORKS

As part of Mod 13, twenty-six new signs are proposed to be erected on the site. Details of each sign are included in **Table 7**.

These signs include:

- ◆ **9 Business Identification signs:** Signs 5, 6, 20, 21, 22, 23, 24, 25 and 26;
- ◆ **9 Business Identification and/or Logo Sign:**
 - Logos - Signs 1, 11, 12 and 19.
 - Tower Logos – Signs 15 and 16.
 - Business Identification and Logos - Signs 9, 17 and 18.
- ◆ **7 Directional and Carpark Signs:** Signs 2, 3, 4, 7, 8, 10 and 13; and
- ◆ **A series of 13 illuminated displays:** Sign 14.

4.11.1 Signage

Two (2) new 'Star' logo signs are proposed on the tower, along with a Ritz-Carlton business identification and logo sign at the podium level along Pirrama Road, refer **Figure 37** to **Figure 39**.

All signs proposed are as per **Table 7**. These signs are located around the site, mainly focussed around new carparking entries and the podium. Due to the diversity of uses on-site signage plays a key role in distinguishing between the uses and increases ease of wayfinding. DWP and FJMT have prepared signage plans, refer to the Architectural Plans in **Appendix B**. A Signage Strategy (**Appendix AAA**) has been prepared for the site which summarises the key intent of signage for the site. No signage is proposed on the SELS building.

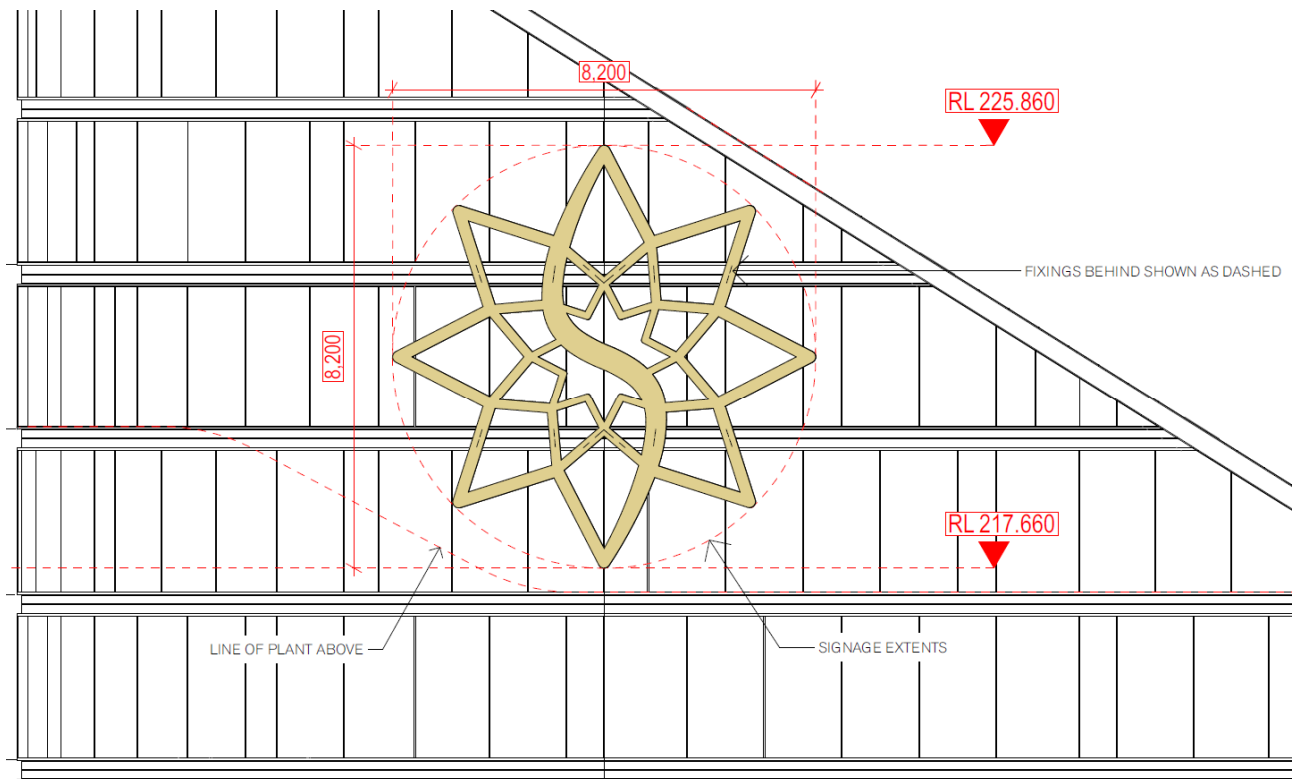


Figure 37 – Top of Tower Logo Sign – West Elevation

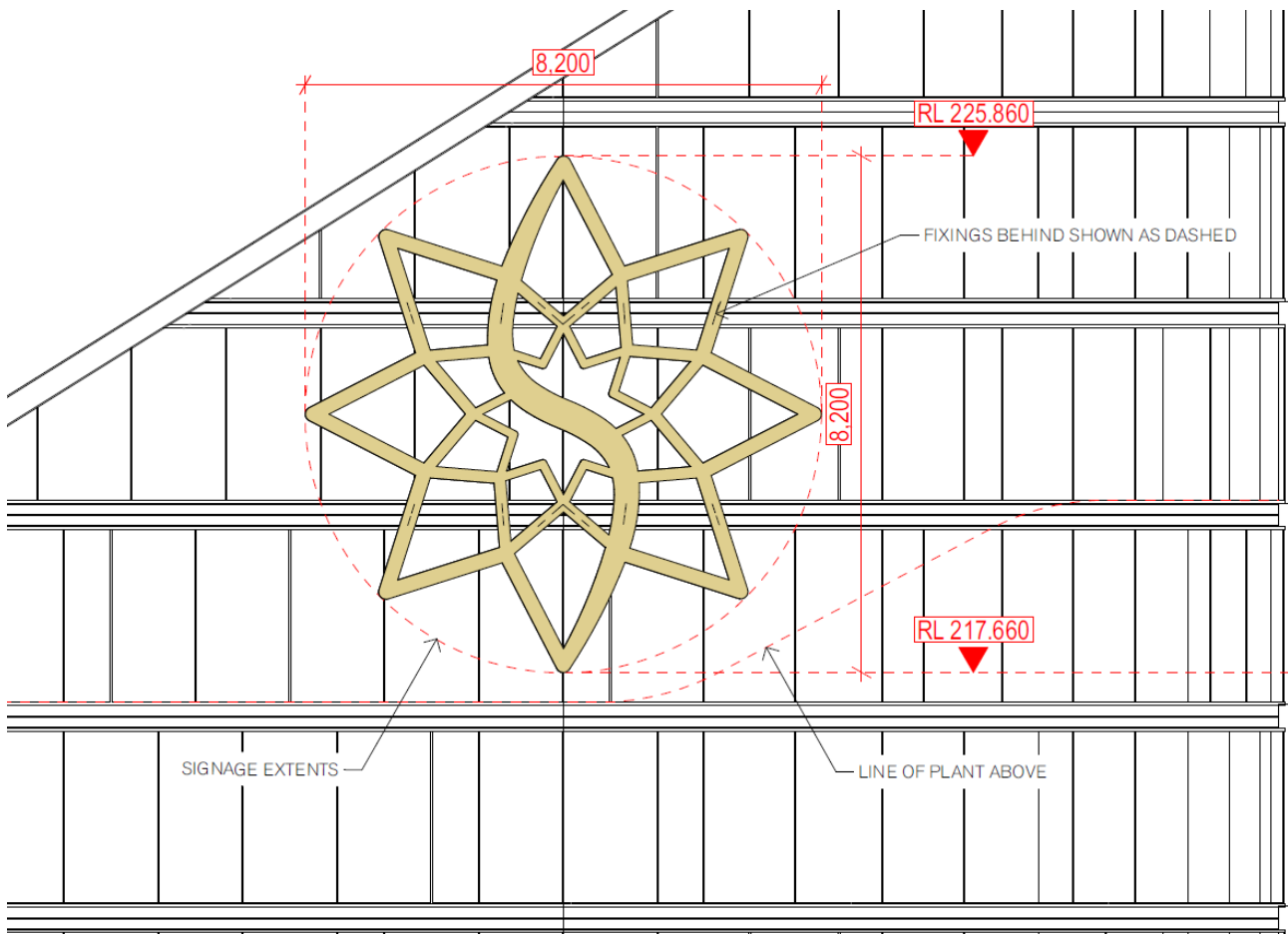


Figure 38 – Top of Tower Logo Sign – East Elevation

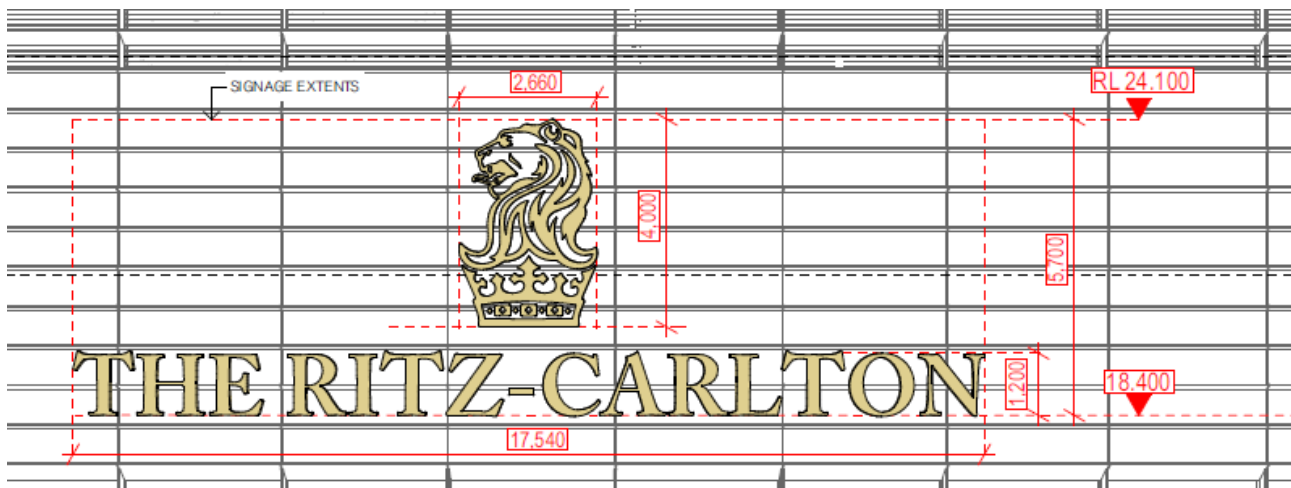


Figure 39 – Porte Cochere Podium Business Identification and Logo Sign

Table 7 – Proposed Signage

Sign Number	Signage Type	Mount Type/ Method of affixation	Size	Location	Illumination	Materiality
Signage 1	Logo Sign	Free standing sign ('The Star' logo)	H: 4,000mm W: 4,000mm D: 400mm Total area: 16sqm	Pirrama Road	Yes	Gold metal finish
Signage 2	Directional Signage for Carpark	Wall mounted	H: 1,500mm W: 15,000mm D: 250mm Total area: 22.5sqm	Edward Street Carpark Entry/Exit	Yes	Signage base panel in aluminium composite material with LED illuminated letters.
Signage 3	Directional Signage for Buses and Taxis	Wall mounted	H: 1,500mm W: 10,840mm D: 250mm Total area: 16.26sqm	Edward Street	Yes	Signage base panel in aluminium composite material with LED illuminated letters.
Signage 4	Directional Signage for Carpark	Wall mounted	H: 1,500mm W: 15,000mm D: 250mm Total area: 22.5sqm	Edward Street Carpark Entry/Exit	Yes	Signage base panel in aluminium composite material with LED illuminated letters.
Signage 5	Business Identification Signage	Wall mounted	H: 1,800mm W: 11,200mm D: 250mm Total area: 20.16sqm	Corner of Edward Street and Union Street	No	Signage base panel in aluminium composite material with non-illuminated letters.
Signage 6	Business Identification Signage	Wall mounted	H: 4,550mm W: 2,400mm D: 250mm Total area: 10.92sqm	Corner of Edward Street and Union Street	No	Signage base panel in aluminium composite material with non-illuminated letters.
Signage 7	Direction Signage for Carpark	Wall mounted	H: 1,850mm W: 10,000mm D: 250mm Total area: 18.5sqm	Pymont Street Carpark Exit	No	Signage base panel in aluminium composite material with non-illuminated letters.
Signage 8	Direction Signage for Carpark	Free standing (on top of awning)	H: 700mm W: 10,000mm D: 250mm Total area: 7sqm	New Pymont Street Carpark Entry	Yes	Signage base panel in aluminium composite material with LED illuminated letters.

Sign Number	Signage Type	Mount Type/ Method of affixation	Size	Location	Illumination	Materiality
Signage 9	Business Identification and Logo Signage	Wall mounted	H: 1,250mm W: 11,900mm D: 250mm Total area: 14.875sqm	Pymont Street pedestrian entry	No	Signage base panel in aluminium composite material with non-illuminated letters.
Signage 10	Directional Signage "Pedestrian access to Pirrama Road"	Projecting	H: 2,200mm W: 200mm D: 1800 Total area: 0.44sqm	Pymont Street	No	Signage base panel in aluminium composite material with non-illuminated letters.
Signage 11	Logo Signage (The Star)	Wall mounted	H: 3,000mm W: 12,000mm D: 250mm Total area: 36sqm	Top of Astral Hotel (western façade)	Yes	Signage base panel in aluminium composite material with LED illuminated letters.
Signage 12	Logo Signage (The Star)	Wall mounted	H: 3,300mm W: 10,700mm D: 250mm Total area: 35.31sqm	Top of Astral Hotel (eastern façade)	Yes	Signage base panel in aluminium composite material with LED illuminated letters.
Signage 13	Direction Signage ("Loading dock")	Wall mounted	H: 1,200mm W: 6,745mm D: 250mm Total area: 8.094sqm	Jones Bay Road	No	Signage base panel in aluminium composite material with non-illuminated letters.
Signage 14	Display Vitrines (x 13) (for high end accessories display)	Wall mounted	H: 1,085mm W: 1,000mm D: 500mm Total area: 1.085sqm	Along pedestrian access corridor on The Darling Hotel drop off side	Yes	Gold metal finish framed boxes internally illuminated.
Signage 15	Tower Logo Sign - Star Logo	Fixing to building glazing (facade) with RHS mounting rails and steel mullions bolted to existing spigots, or similar.	H: 8,200mm W: 8,200mm D: 400mm Size: 67.24sqm	Top of Tower – East Elevation Top: 225.86 RL Bottom: 217.66 RL	Face to be internally illuminated.	Aluminium lightbox with flex face banner, or similar. RHS mounting rails and steel mullions bolted to existing spigots, or similar.
Signage 16	Star Logo Sign - Star Logo	Fixing to building glazing (facade) with RHS mounting rails and steel mullions	H: 8,200mm W: 8,200mm D: 400mm Size: 67.24sqm	Top of Tower – West Elevation Top: 225.86 RL Bottom: 217.66 RL	Face to be internally illuminated.	Aluminium lightbox with flex face banner, or similar. RHS mounting rails and steel mullions bolted to existing spigots, or similar.

Sign Number	Signage Type	Mount Type/ Method of affixation	Size	Location	Illumination	Materiality
		bolted to existing spigots, or similar.				
Signage 17	Business Identification and Logo Sign – Ritz Carlton Logo and Wording		Logo: H: 4,000mm W: 6,660mm D: ? Size: 26.64sqm Wording: H: 1,200mm W: 16,400mm D: 400mm Size: 19.2sqm	Pirrama Road – Podium above porte cochere Top: 24.1 RL Bottom: 18.4 RL	Face not illuminated, but light cast back onto substrate facade via resinated LEDs or similar.	Bronze/gold powder coated aluminium, stainless steel (or similar) face, with aluminium light box fixed to facade substrate via threaded rods or similar.
Signage 18	Business Identification and Logo Sign– Ritz Carlton Logo and Wording	Fixed to facade via concealed threaded rods	H: 2,700mm W: 6,560mm D: 250mm Size: 17.712sqm	Pirrama Road Hotel Porte Cochere Top: 7.00 RL Bottom: 7.3 RL	Face not illuminated, but light cast back onto substrate facade via resinated LEDs or similar.	Bronze/gold powder coated aluminium, stainless steel (or similar) face, with aluminium light box fixed to facade substrate via threaded rods or similar.
Signage 19	Logo Sign – Ritz Carlton Plaque	Wall mounted, flush to facade	H: 800mm W: 4,500mm D: 30mm Size: 3.6sqm	Fronting Pirrama Road (behind glazing) Top: 5.35 RL Bottom: 4.85 RL	No	Cast bronze plaque with protective smooth coating, or similar.
Signage 20	Business Identification - Future Tenancy	Fixing to building glazing (facade) with RHS mounting rails and steel mullions bolted to existing spigots, or similar.	H: 1,000mm W: 6,500mm D: 250mm Size: 6.5sqm	Fronting Pirrama Road (behind glazing) for neighbourhood centre. Top: 7.00 RL Bottom: 6.2 RL	Yes	Lightbox with flex face banner, or similar.
Signage 21	Business Identification - Future Tenancy	Fixing to building glazing (facade) with RHS mounting rails and steel mullions bolted to existing spigots, or similar.	H: 2,200mm W: 2,400mm D: 250mm Size: 5.28sqm	Fronting Jones Bay Road (behind glazing) for neighbourhood centre. Top: 11.7 RL Bottom: 9.5 RL	Yes	Lightbox with flex face banner, or similar.

Sign Number	Signage Type	Mount Type/ Method of affixation	Size	Location	Illumination	Materiality
Signage 22	Business Identification - Future Tenancy	Fixed to facade via concealed threaded rods	H: 1,100mm W: 5,500mm D: 250mm Size: 6.05sqm	Fronting Jones Bay Road (behind glazing) for neighbourhood centre. Top: 13.8 RL Bottom: 12.7 RL	Yes	Lightbox with flex face banner, or similar.
Signage 23	Business Identification	Fixing to building glazing (facade) with RHS mounting rails and steel mullions bolted to existing spigots, or similar.	H: 1,100mm W: 13,000mm D: 250mm Size: 14.3sqm	Fronting Jones Bay Road for Residential Lobby Top: 13.8 RL Bottom: 12.7 RL	Yes	Lightboxes with flex face banner, or similar.
Signage 24	Business Identification - Future Tenancy	Both fixed to facade via concealed threaded rods	Sign 1 H: 1,000mm W: 5,800mm D: 250mm Size: 5.8sqm Sign 2 H: 1,000mm W: 12,200mm D: 250mm Size: 12.2sqm	Fronting Jones Bay Road. Top: 13.8 RL Bottom: 12.7 RL	Yes	Lightboxes with flex face banner, or similar.
Signage 25	Business Identification - Future Tenancy	Fixing to building glazing (facade) with RHS mounting rails and steel mullions bolted to existing spigots, or similar.	H: 900mm W: 3,500mm D: 250mm Size: 2.835sqm	Fronting Pirrama Road. Top: 5.45 RL Bottom: 4.55 RL	Yes	Lightboxes with flex face banner, or similar.
Signage 26	Business Identification - Future Tenancy	Fixing to building glazing (facade) with RHS mounting rails and steel mullions bolted to existing spigots, or similar.	H: 900mm W: 3,500mm D: 250mm Size: 2.835sqm	Fronting Pirrama Road. Top: 5.45 RL Bottom: 4.55 RL	Yes	Lightboxes with flex face banner, or similar.

4.11.2 Consolidation of Signage Approvals

It is proposed to consolidate all previous signage as part of Mod 13. Consequently, it is proposed to surrender the identified City of Sydney development consents, set out in **Section 2.3.1**, relating to signage as the controls are complete and there are no ongoing operational conditions. The details of existing signage to be retained is shown on the drawings in **Appendix B**.

4.12 INFRASTRUCTURE UPGRADES

4.12.1 New Plant Room

New plant rooms are proposed within the podium of the tower over Levels 03, 04, 05, and 06 in the general location as shown in **Figure 40**, as well as at Levels 41 and 62 to 65.

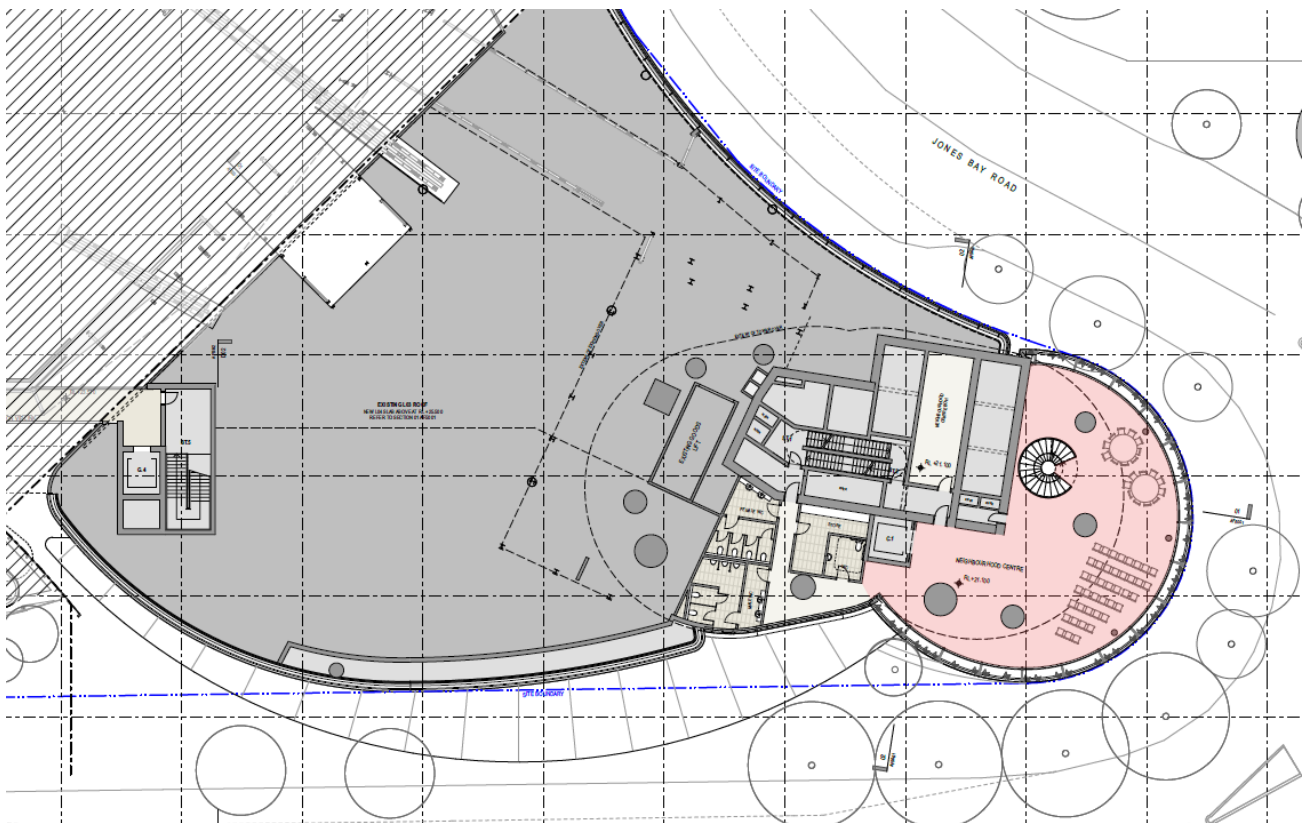


Figure 40 – Podium Level Plant (Level 03)

4.12.2 Relocation of Plant & Generator Flues

There are currently two forced-draft cooling towers located on the northern end of the Level 3 'Green Roof.' The cooling towers were installed to provide an alternative base-load heat rejection pathway whilst the main sea water heat rejection is taken offline for annual maintenance. It is expected that the cooling towers will be required less frequently due to the seawater heat rejection upgrades approved under Mod 14.

Mod 13 proposes to relocate the cooling towers and the main switchboards to the Level 08 plant room adjacent to MUEF and the Astral Hotel as shown in **Figure 41**. The location will ensure that minimum separation distances to boundaries, natural ventilation devices and air intakes are exceeded. Further wind effects and kitchen odour have been considered, to minimise risk of nuisance to users of The Star, neighbouring properties, and the public.

Refer to the Mechanical Services Report in **Appendix KK** and the Air Quality Report at **Appendix EE** for further details.

It is also proposed to relocate the flues associated with the existing diesel generators to the side of the new Level 09 plantroom, adjacent to the northern section of the Astral Hotel, as shown in **Figure 42** further below.

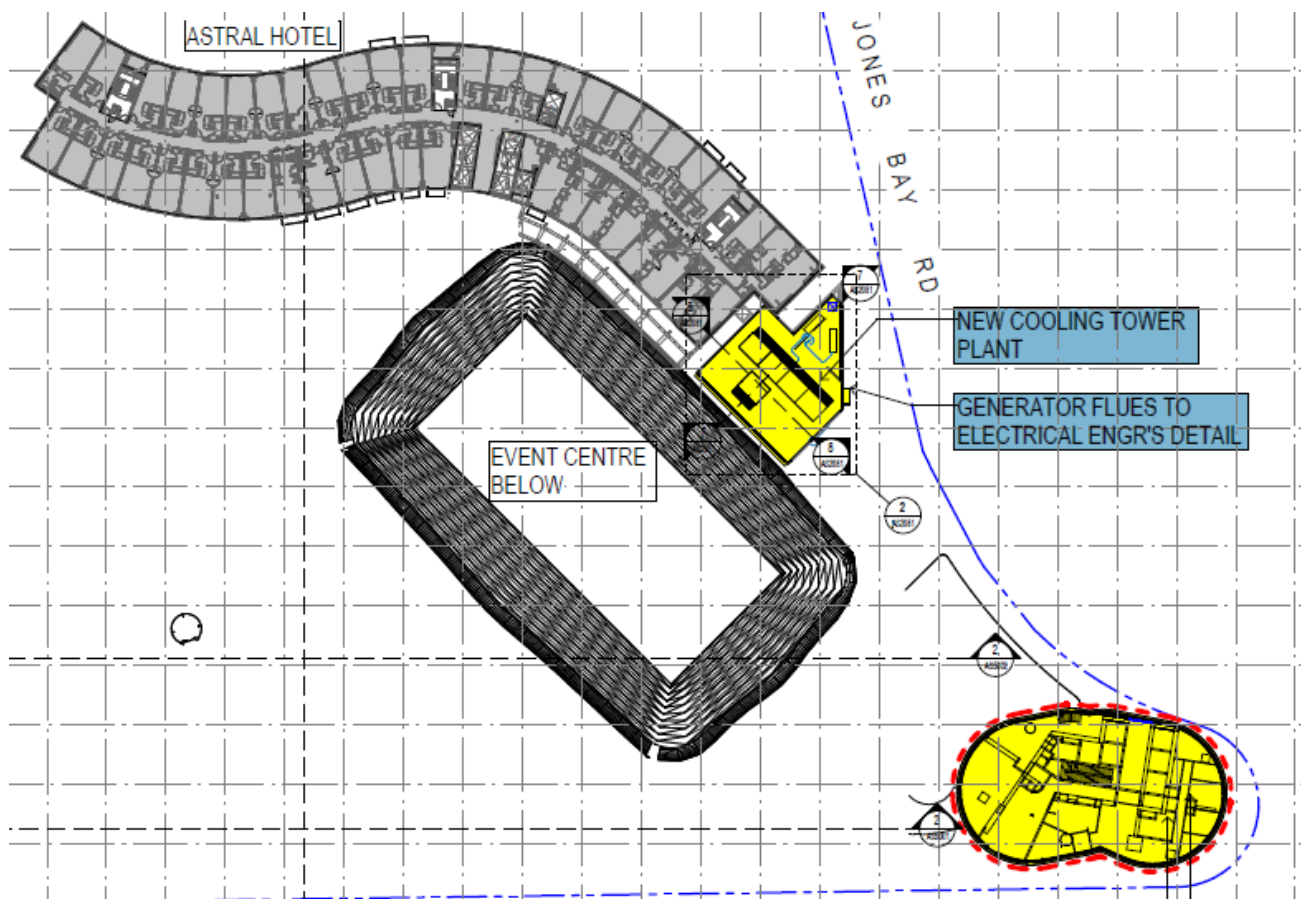


Figure 41 – Podium Level Plant (Level 08)

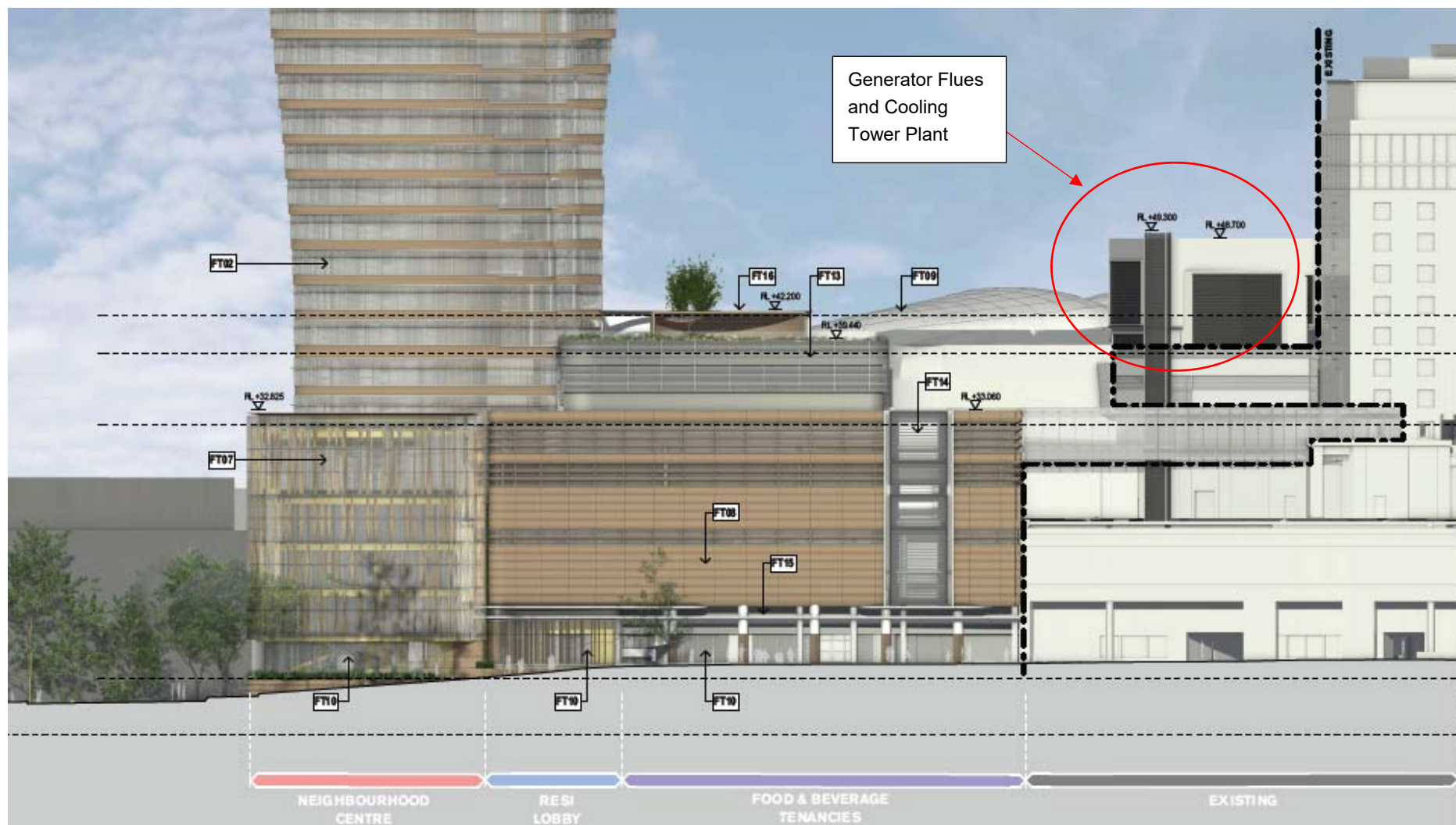


Figure 42 - Elevation of Plant

4.12.3 New Capstone Microturbine Units

New capstone microturbine units and associated flues are to be located in the proposed plant room between the Darling Hotel and the Astral Residence Tower at Level 03, and in a new plant room adjacent to the MUEF, as shown in **Figure 43** below. The proposed capstones adjacent to the Astral Residences tower will replace the capstones approved under Mod 14 in Basement Level B02. The area where the capstones were to be located in B02 will be retained as plant room.

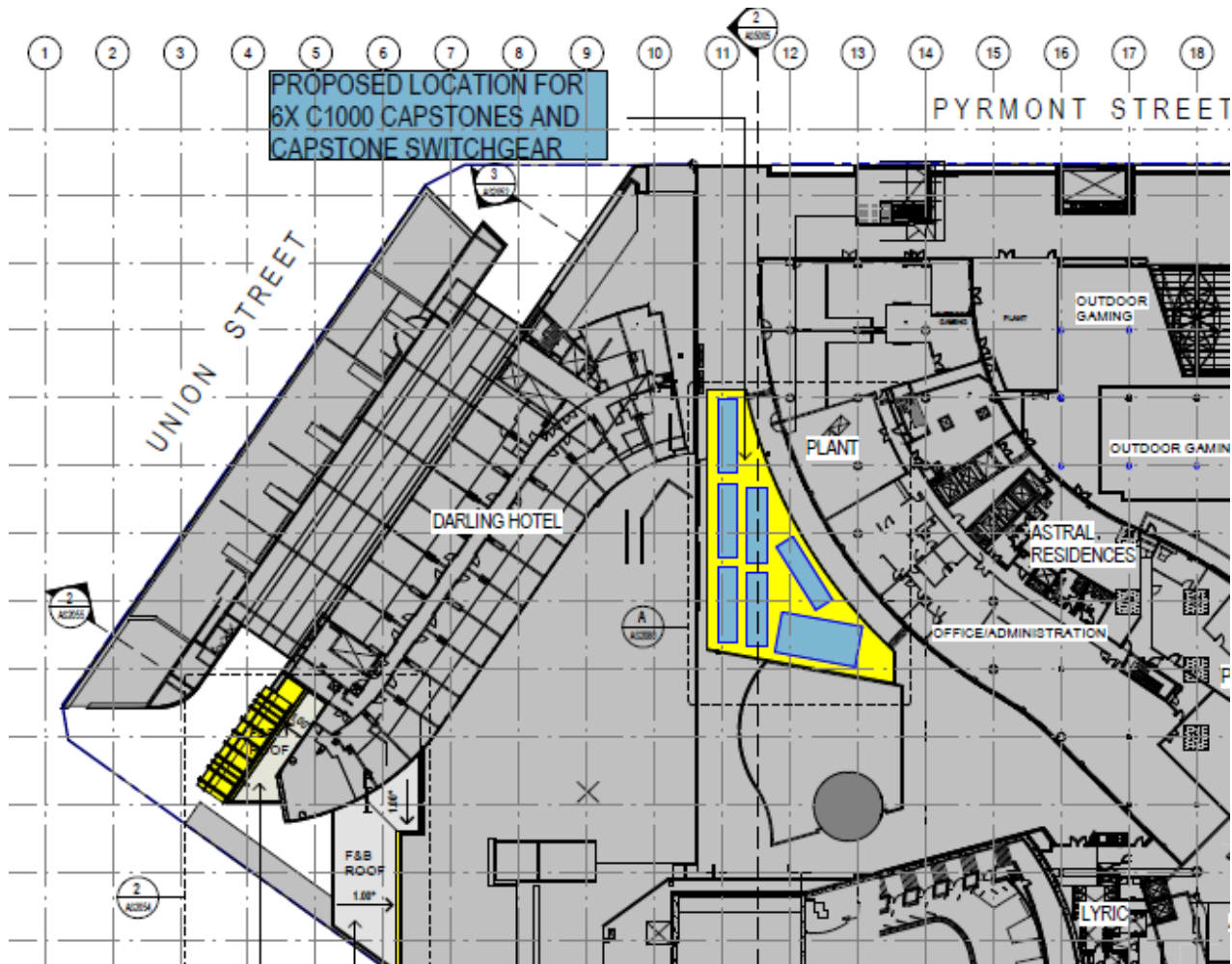


Figure 43 – Capstones at Level 03

4.12.4 Loading Dock Upgrades

Mod 14 approved upgrades to the Jones Bay Road loading dock area at Level 00 to increase the storage capacity and sorting area at the dock, to improve the overall functioning and operations of the loading load. Mod 13 does not seek to modify Jones Bay Road loading dock.

Mod 13 proposes to upgrade The Star Events Loading Dock to accommodate the additional capacity requirements associated with the Proposal. The upgraded loading dock will provide:

- ◆ 1x HRV raised dock.
- ◆ 2 x MRV raised dock.
- ◆ 1x SRV raised dock.
- ◆ Vehicle waiting areas for 2-3 MRV/SRV.

The upgraded The Star Events Centre Loading Dock is shown in **Figure 44** below.

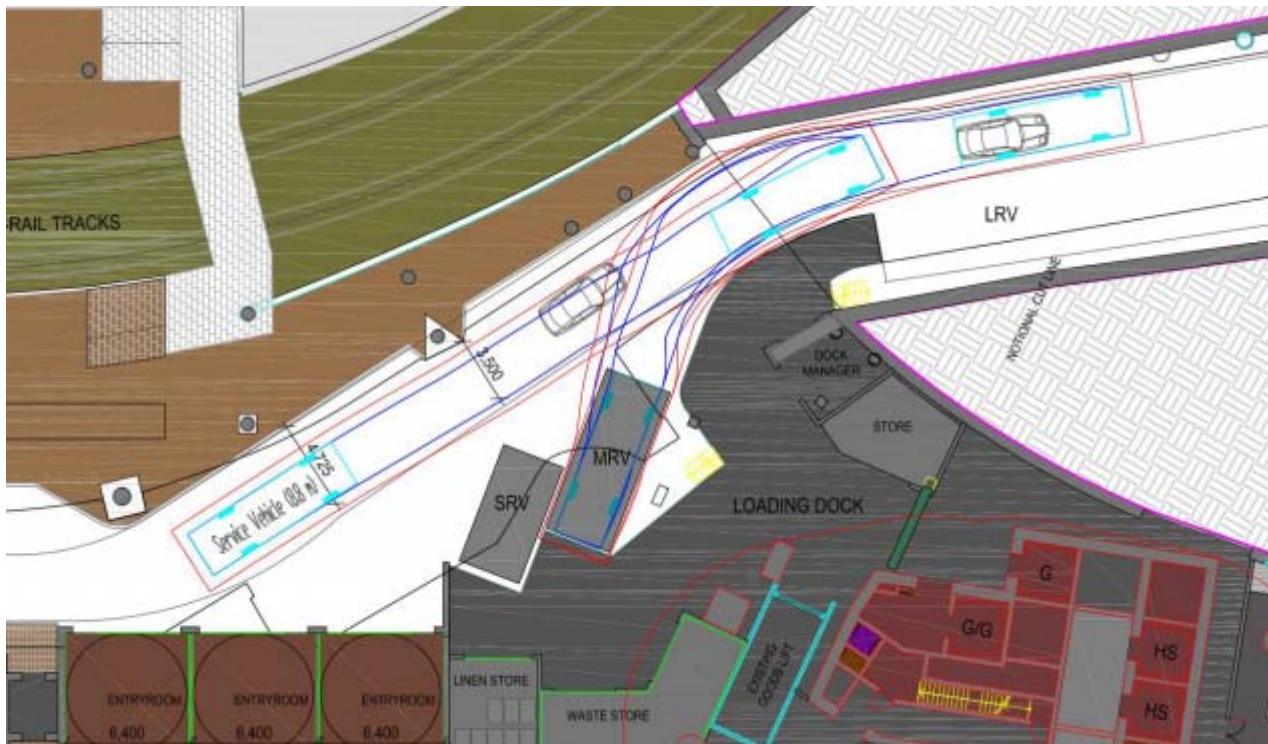


Figure 44 – The Star Events Loading Dock Upgrades

Outside of special events, this loading dock currently operates between 6 am and 6 pm, Monday to Saturday. It is also proposed, as part of Mod 13, to increase the loading dock operating hours to 24 hours, Monday to Friday, and on Saturdays, Sundays and Public Holidays as required.

The proposed upgrades and increase in operating hours have been designed to accommodate the existing demand, as well as the uses proposed as part of Mod 13.

Change Logic have prepared a Loading Dock Management Plan which is provided at **Appendix JJ**. Refer to **Section 9** for a discussion on the impact of the upgraded loading dock operation on the servicing of the site and proposed mitigation measures.

4.13 LEVEL B02 TRANSPORT INTERCHANGE

Several upgrades to the Level B02 transport interchange are proposed, including:

- ◆ Entry into Basement car stacker for the Tower apartments and Ritz-Carlton Hotel;
- ◆ New commuter bike parking and hire bike system;
- ◆ Upgrade of finishes to light rail station surrounds and removal of existing wall barrier to the Pirrama Road frontage;
- ◆ Upgraded taxi-rank arrangements;
- ◆ New Star coach parking; and
- ◆ Realignment of kerbs and line-marking.

There are no works proposed within the light rail corridor (i.e. Lot 211 in DP 870336) under Mod 13.

The relocation of the Pirrama Road taxi rank to the internal service road was approved under Mod 14. Under Mod 13, it is proposed to formalise the taxi arrangement with a taxi rank along the eastern side of the service road adjacent to the new Pirrama Road entry plaza, including the installation of a new taxi queuing system for managing waiting patrons, including:

- ◆ 2 pick-up bays.
- ◆ 2 set-down bays.
- ◆ A feeder rank with space for more than 12 taxis.
- ◆ A taxi call-up system to feed the following pickup ranks around the site:
 - Ritz Carlton Hotel;
 - Astral Hotel;
 - Casino; and
 - Astral Residence

This upgraded taxi rank will accommodate taxis that currently queue along the on-street feeder rank in Jones Bay Road, which is to be removed as part of the porte-cochere access works describe below.

The improvement works on this level also include 13 commuter bike lockers and 20 rental bikes adjacent to the light rail platform in the Pirrama Road forecourt. The proposed Level B02 Transport Interchange works are shown in **Figure 45** below.

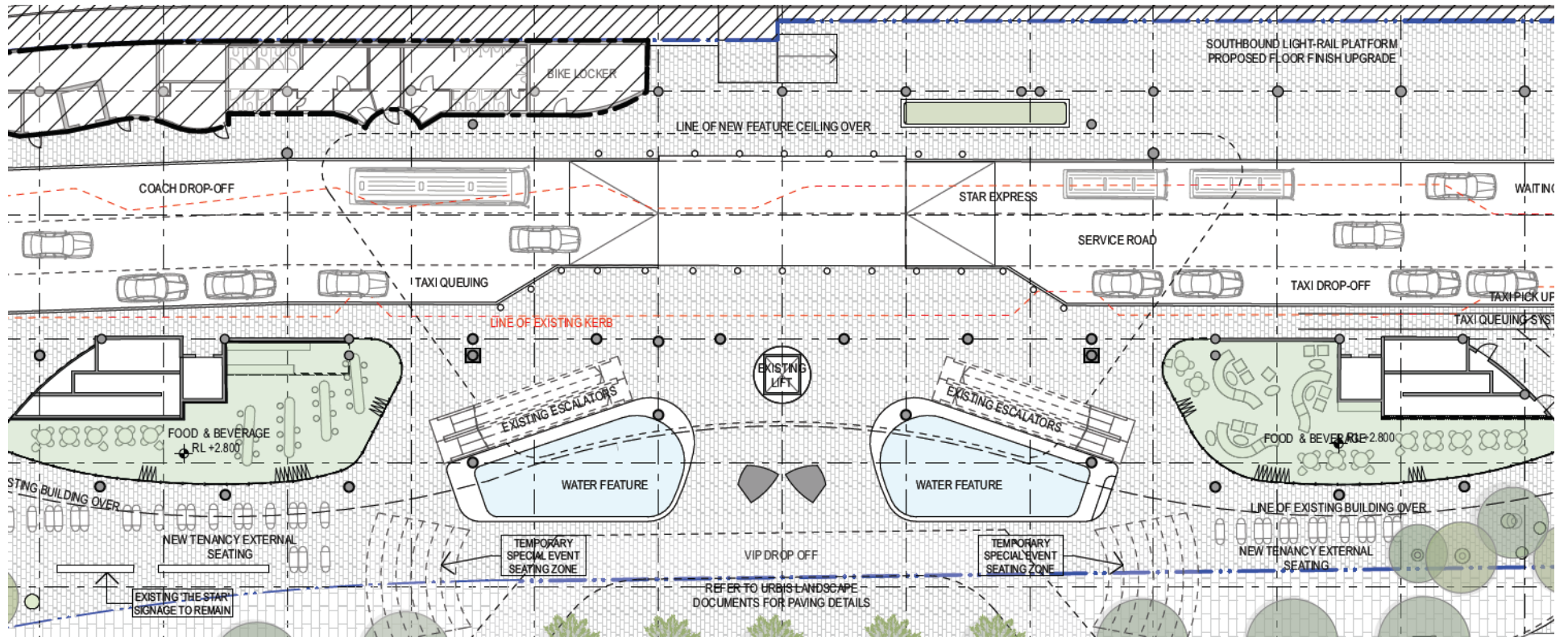


Figure 45 – Level B02 Transport Interchange works

4.14 TRANSPORT IMPROVEMENTS – LOCAL ROAD WORKS

4.14.1 Porte Cochere Access

Mod 14 approved the realignment of the Porte Cochere to accommodate reconfiguration to the Astral Lobby and Lobby Bar and facilitate improvements to the efficiency of the valet parking system. As a result of modifications to the layout and width of the porte-cochere adjacent to the existing set-down and pick-up areas. Mod 13 seeks to modify vehicle access arrangements to the Porte Cochere from Jones Bay Road, which is currently restricted to a left-turn entry only.

A right turn facility from Jones Bay Road into the Port Cochere is proposed.

As shown in **Figure 46**, the proposed works will include the reconfiguration of existing median strips in Jones Bay Road and the addition of new median strip on Pymont Street with associated line-marking to enable a new right-hand turning lane into the Porte Cochere.

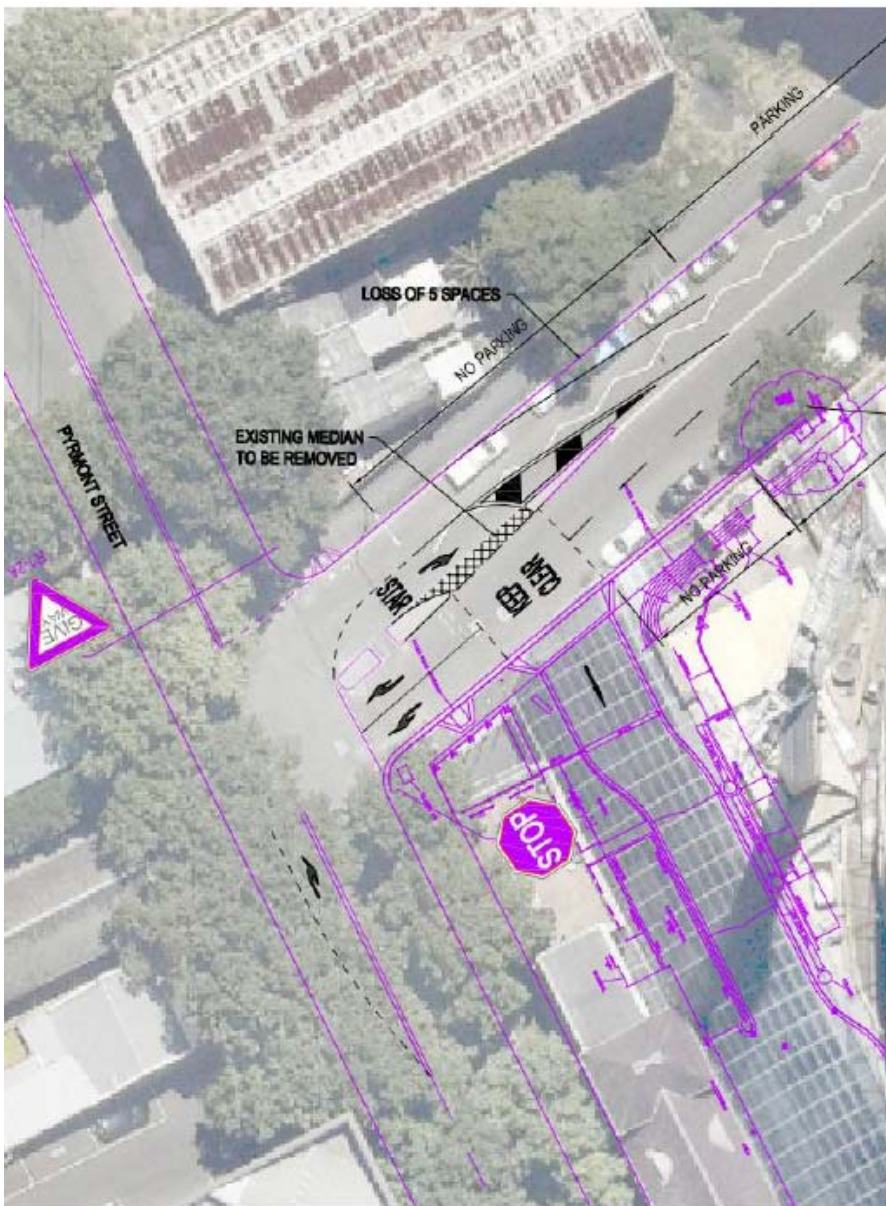


Figure 46 – Porte-Cochere Right Turn Access Works

As part of these works, it is also proposed to remove the Jones Bay Road taxi feeder rank with all taxi queuing to be within the formalised taxi rank within the service road.

Refer to the Traffic Impact Statement and Traffic Simulation at **Appendix J** showing the Porte Cochere operation.

4.14.2 Pymont Street Carpark Entry

It is proposed to create a new carpark entry on Pymont Street, located 70 m north of Union Street, and opposite the car park entry at 100 Harris Street.

The Pymont Street entry will facilitate Sovereign member access to the Level B1 car park. The entry ramp design features:

- ◆ A 'Category 4' driveway with 2-lane entry and exit ramps;
- ◆ Ramp grades less than 1 in 5 with transitions to prevent underside scraping in accordance with AS2890.1;
- ◆ Provision of boom-gates at the bottom of the ramp on a flat grade;
- ◆ The vehicle queuing distance from Pymont Street down to the entry boom gate is 48m (8 vehicles);
- ◆ Removal of parking spaces to allow turning movements at the end of the blind aisles created by the entry/exit ramp bisecting the upper mezzanine level as required by AS2890.1;
- ◆ Minor reconfiguration of Level B1 circulation patterns;
- ◆ Removal of 18 on-site parking spaces; and
- ◆ Removal of 4-5 parking on-street parking spaces across the new driveway entrance.

To achieve suitable overhead clearances on the access ramps the western side of the Porte Cochere will need to be raised as shown in the Architectural Plans at **Appendix B**. This will not impact taxi or valet operations as the area is used for display of luxury vehicles.

Flood gate to a height of 7.44m AHD is proposed across the full vehicle entrance of the proposed Pymont Street car park entry to provide flood protection in accordance with Sydney DCP 2012.

4.14.3 Pymont Parking Guidance System Modifications

As described in the Traffic Impact Statement at **Appendix J**, the existing parking guidance system in place around The Star, does not adequately manage traffic and parking flow as it is:

- ◆ Not fully operational;
- ◆ Not up-to-date in respect to all available local car parking opportunities;
- ◆ Not designed or operated to a consistent standard; and
- ◆ Ineffectual in providing drivers with accurate and timely real-time information enabling them to make informed decisions on their car parking options.

A commitment under Mod 14, is that SEGL will work with Parking Assist and TfNSW to deliver upgrades to the PPGS to provide timely warning to drivers regarding carparks already at capacity in order to improve traffic circulation and enable drivers to choose an alternate parking options. It was identified that:

- ◆ SEGL would work with TfNSW and Parking Sense to upgrade the PPGS;
- ◆ Provide data feed to Parking Sense, and mobile parking apps, to continually update signage displays; and
- ◆ Contribute to upgrade costs of the system and lead resolution of the proposed signage.

Modifications to the PPGS scheme are now proposed to include:

- ◆ Two new static signs on Pyrmont Bridge Road; and
- ◆ A re-design of the Pyrmont Bridge Road and Pyrmont Street sign.

The two new static signs and the redesigned Pyrmont Bridge Road and Pyrmont Street sign is shown in blue in **Figure 47**. The existing signs and upgrades committed as part of Mod 14 are shown in grey for information.



Parking Stations

- | | | |
|------------------------------------|---|---------------------------|
| 1. The Star Pirrama Road Car Park | 3. The Star Valet parking | 6. Harris Street Car Park |
| 2. The Star Edward Street Car Park | 4. Harbourside Car Park | 7. ICC Sydney Car Park |
| 5. Jones Bay Wharf Car Park | 8. The Star Sovereign Pyrmont Street Car Park | |

Figure 47 – Proposed PPGS signs

4.15 SITE WIDE LANDSCAPE AND PUBLIC DOMAIN UPGRADES

As described in the Landscape Plans at **Appendix D** and the Landscape Design Report at **Appendix E**, site wide landscaping and public domain upgrades are proposed follows:

Pirrama Road Arrival & Light Rail Entry

- ◆ Upgrades to the paving inside the property boundary and the asphalt footpath;
- ◆ Removing parts of the existing wall between the street and existing loading dock to improve pedestrian access and wayfinding to the site and light rail stop;
- ◆ Five existing palms are to be retained in the central part of the frontage, with more dense canopy trees to be provided on either side; and
- ◆ Existing grove of magnolias are to be retained and protected.

Pirrama Road and Jones Bay Road

- ◆ Upgrades to the asphalt footpath and replacement street trees and gardens on the boundary;
- ◆ Removal of four trees as part of the porte-cochere addition;
- ◆ Two replacement street trees are proposed in place of the four trees removed; and
- ◆ Jones Bay Road upgrades including upgrades to the paving finishes up to the extent of existing loading dock entrance.

SELS Plaza

- ◆ Level out the small plaza space;
- ◆ A sculptural sandstone seating wall wrap around the tenancy boundary to retain existing footpath levels; and
- ◆ The existing asphalt footpath will be reinstated.

Pymont Street Driveway Entry

- ◆ Upgrades to the entry to match the existing driveway crossover materials around the site;
- ◆ Two trees to be removed; and
- ◆ Reinstated existing asphalt footpath adjacent to the Pymont Street entry.

Level 4 Neighbourhood Centre Terrace

- ◆ The terrace will act as a 'winter garden' with canopy above to protect views from apartments above; and
- ◆ A curvaceous planter to the perimeter of the terrace will soften the appearance of the space while maintaining views over Jones Bay Road.

Level 03 VIP Link

- ◆ Outdoor planter adjacent to VIP link from hotel to Sovereign gaming room.

Level 05 Private Balcony

- ◆ Additional private open space for two apartments above the Neighbourhood Terrace. A balcony planter will provide privacy for residents and to those on the terrace below.

Level 5 Sky Terrace

- ◆ Provide a variety of informal lounge areas and dining spaces. Proposed restaurant spaces are to be framed with planter and movable pots.

Level 06 Sedum Roof

- ◆ Green sedum and succulent roof planting will cover much of the light weight roof structure over new additions to the Level 05 Sky Terrace and day spa facilities.

Level 07 Ribbon

- ◆ A simple landscape design will complement the expansive views of the harbour, frame the 2 pools and space area.

Level 7 Residential Pool and Garden

- ◆ The north facing pool on at the edge of the podium will be framed by a tropical palette of plants to provide softness and privacy; and
- ◆ A central lawn can be used for active and passive activity or an extension of the BBQ area and communal dining rooms.

Level 8 Sedum Roof

- ◆ A green sedum and flowering grass roof will go on top of the residential break out rooms and kitchen associated with the communal open space.

Green Spine

- ◆ Vertical planting on wire trellis cable system will create a green façade on the western edge of the Ritz Carlton Hotel tower. Occurring every 3rd floor from level 21 to the Club Lounge.

Club Lounge

- ◆ The outdoor area will act as an extension of the interior lounge bar and feature an outdoor bar with tables and chairs, and an artificial lawn with lounge chairs;
- ◆ Bismark palms in movable pots and an informal lounge with sunken fire pit; and
- ◆ The area will be framed with low shrub planting.

4.16 STORMWATER UPGRADES

Stormwater upgrade works are proposed in order to decrease the potential flood risk to the site, adjacent existing properties and the general public compared to the existing situation. These upgrade works are summarised below.

Pymont Street

- ◆ 16 existing pits upgrades to 3 m kerb inlet pits.
- ◆ 36 m of 375 mm pipe upgraded to 600 mm pipe.
- ◆ 68 m of 450 mm pipe upgraded to 900 mm pipe.

Edward Street

- ◆ Two new three metre kerb inlet pits.
- ◆ Two existing pits upgraded to three metre kerb inlet pits.
- ◆ Five metres of new 750 mm pipe.
- ◆ Nine metres of 300 mm pipe upgraded to 600 mm pipe.
- ◆ Three metres of 375 mm pipe upgraded to 750 mm pipe.
- ◆ Ten metres of new 600 mm pipe.

4.17 SITE WIDE ACOUSTIC STRATEGY AND 3D NOISE MODEL

The conditions of consent for MP08_0098 set out cumulative noise level limits that are to be met at receivers outside the site boundary. WSP notes that this site-wide approach to noise emission limits and verification is appropriate for the site because multiple noise sources may contribute to the overall noise at a receiver location, and it is not possible to switch off all the other noise sources from the site to enable an accurate reading of a single noise source.

In order to set the noise emission criteria for assessment and to determine the levels of existing ambient noise, an environment noise survey was undertaken at seven locations representative of the surrounding sensitive receivers.

The assessment considered the noise emissions from mechanical plant, patron and music noise in addition to other noise sources such as vehicle movements on site in order to determine the noise levels that should be met at the nearest affected sensitive receivers in accordance with the relevant noise policies and conditions of consent noted above.

In order to undertake the assessment, WSP has developed a three-dimensional computer noise model using software SoundPlan (version 7.4) as discussed further under **Section 9.12** and the Noise Impact Assessment at **Appendix K**.

4.18 SITE WIDE LIGHTING STRATEGY INCLUDING SPECIAL EVENTS LIGHTING

A site-wide lighting strategy comprising lighting works to the MUEF and the proposed Hotel and Residential Tower, and improvements to the existing lighting across the site are proposed and will include:

- ◆ Internal lighting of Hotel and Residential spaces;
- ◆ Illumination of top of the tower with integrated architectural lighting to enhance the sandstone finishes and angled roof profile. The illumination will be provided by the internal lighting of the hotel to create a lantern effect illuminating the curvilinear façade;
- ◆ Illuminated highlights at the Sky Lobby and Club Lounge levels;
- ◆ Integrated lighting on the eastern and western vertical façade slots and angled roof profile;
- ◆ Podium external illumination from awnings, and under retail and lobby colonnades;
- ◆ Landscape lighting on Level 07 open terraces and pool decks;
- ◆ Feature lighting accentuating the wing-like profile of the Ribbon and vertical element;
- ◆ Internal and external lighting to F&B outlet at Union/Edward Street corner; and
- ◆ Permanent installation of moving projector lights on the rooftop of the Astral Hotel for fifty-three (53) special event nights per year.

It is noted that Façade LED lighting to the heritage SELS Building was approved under Mod 14. No additional lighting is proposed under Mod 13 for the SELS Building.

Special Events lighting including:

- ◆ New Year's Eve – 1 night;
- ◆ New Year's Day – 1 night;
- ◆ Chinese New Year – 20 nights;
- ◆ Vivid Sydney – 21 nights;
- ◆ ARIA – 1 night;
- ◆ State of Origin – 3 nights;
- ◆ Australia Day – 1 night; and
- ◆ Christmas – 5 nights.

It is proposed that the temporary Vivid Sydney lighting installation become a permanent installation at The Star for special events. This installation consists of thirty-six (36) Clay Paky Super Sharpys and thirty (30) LED flood EX36 moving projector lights mounted to the roof of the Astral Towers.

The proposed hours of operation of the Special Events Lighting are from 6:00pm to 11:00pm during Vivid Sydney and dusk to 11:00pm for other special event nights for up to 53 nights per calendar year (including 21 days for Vivid).

Refer to the Site-Wide Lighting Management Plan at **Appendix T** for further details.

4.19 DEVELOPMENT STAGING

As part of Mod 13, it is proposed to upgrade, refurbish and revitalise The Star whilst maintaining 24-hour operation, seven days per week.

The proposed works are scheduled for commencement on approval of Mod 13, and will take approximately four years to complete. The indicative construction phases for Mod 13 set out below are approximately in order of construction but may overlap in duration. It is noted that this indicative staging is subject to detailed staging being developed in consultation between SEGL and the Main Contractor (to be appointed prior to construction).

It is proposed that 'Phase 1/1B Enabling Works' and 'Phase 2 Demolition and Excavation', separate Construction Certificates be obtained where required to enable the project to commence ahead of the 'Tower Main Works'.

It is proposed that for Phase 3A Tower, a separate staged completion for the residential portion of the tower be obtained ahead of the overall tower project.

Table 8 – Indicative Construction Phasing

Indicative Construction Phase	Associated Works
Phase 1	
Tower Enabling Works (internal only)	<ul style="list-style-type: none"> ◆ Site investigation of existing services ◆ Establishment of environmental and safety controls prior to relocation works ◆ Relocation of the Data Recovery Centre into a new internal data room ◆ Relocation of the Main Switch Room into a new internal switch room ◆ Adjustments to MUEF AV switch room ◆ Rerouting of internal run of diesel generator flue run ◆ Relocation and adjustments of mechanical plant in fly tower within demolition zone ◆ Progressive decanting of the existing SEGL offices within the demolition zone to new offices ◆ Relocation, protection and termination of services in the vicinity of the demolition cut zone
Phase 1B	
Tower Enabling Works (after Mod 13 Approval concurrent with demolition works)	<ul style="list-style-type: none"> ◆ Site investigation of existing services ◆ Establishment of environmental and safety controls prior to relocation works ◆ Relocation of the Data Recovery Centre into a new internal data room ◆ Relocation of the Main Switch Room into a new internal switch room ◆ Adjustments to MUEF AV switch room ◆ Rerouting of internal run of diesel generator flue run ◆ Relocation and adjustments of mechanical plant in fly tower within demolition zone ◆ Progressive decanting of the existing SEGL offices within the demolition zone to new offices ◆ Relocation, protection and termination of services in the vicinity of the demolition cut zone
Phase 2	
Tower Demolition and Excavation	<ul style="list-style-type: none"> ◆ Site survey and dilapidation survey ◆ Establishment of environmental and safety controls prior to demolition and excavation works

Indicative Construction Phase	Associated Works
	<ul style="list-style-type: none"> ◆ Establishment of pedestrian safe access zones. (Refer to the pedestrian access arrangements detailed in the Modification 13 Traffic Impact Statement) ◆ Establishment of tower cranes ◆ Demolition of part of the existing building in the northern portion of the site ◆ The cut line has been positioned to ensure that the MUEF, existing loading dock and existing goods lift remains operational throughout the works ◆ The Head Contractor must provide the necessary support and lateral stability to the existing structure during and after demolition ◆ The Head Contractor must also ensure that there are no impacts on existing businesses, such as the level 01 sports bar ◆ Shoring and bulk excavation works
Phase 3A Tower Construction	<ul style="list-style-type: none"> ◆ Construction of foundations: pad footings founded on sandstone and basement ◆ New 225 space car stacker that will be founded below level B2 ◆ Lateral stability system: a reinforced concrete core and outrigger system utilizing the full building footprint ◆ Outrigger wall connections to the perimeter Mega-Columns ◆ Gravity Columns - typically blade columns located to align with party walls, to suit the sloping and twisting building profile whilst maintaining vertical continuity the structural solution is to 'step' the blades as required along their longer axis ◆ Interface with existing structure - the tower podium is to be isolated from the existing structure via a permanent movement joint. Room planning and floor efficiency require the tower core to be located adjacent to an existing operational goods lift ◆ Clad and glazed façade system ◆ The existing Porte-Cochere will require a reconfigured column layout. Existing columns running adjacent to ground level to be reconfigured. New columns to be located east of the proposed demolition extent ◆ A new drop-off/pick up area (short-term parking) on Jones Bay Road for the proposed apartments ◆ New residential pool will be constructed in either in-situ concrete or, in fabricated stainless steel. The Head Contractor must ensure that the pool has full acoustic isolation from the rest of the structure
Level 7 Ribbon	<p>The Level 7 Ribbon extension from Ritz Carlton tower at level 07 along the Pirrama Rd frontage is the recreational pool and bar deck for the Ritz Carlton (northern half) and Star (southern half)</p> <ul style="list-style-type: none"> ◆ Pile foundations for the new ribbon structure ◆ Provision of new steel columns with fire protection, to support proposed 'ribbon' structure at level 07 ◆ Floor structure at level 07 made of long span steel beams ◆ Two new pools including pool decks, (one for the new hotel, one for The Star). The pools will be constructed in either in-situ concrete or, in fabricated stainless steel ◆ SEGL is investigating the opportunity of constructing the Level 7 Ribbon and Level 5 Sky Terrace in conjunction with the Sovereign construction programme. The benefits of shorter overall construction programme, reduced construction impact on traffic, noise and air quality is obvious
Other Components	<p>The other Mod 13 components, the balance of site works are categorised as follows:</p> <ul style="list-style-type: none"> ◆ Discrete components on a relatively small construction footprint <ul style="list-style-type: none"> • Union-Edward Street corner F&B outlet

Indicative Construction Phase

Associated Works

- Pyrmont Street car park entry
- ◆ Fitout works
 - L00 Restaurant Street
 - L5 Astral Day Spa
 - L5 Sky Terrace
 - Opening up of B2 Light Rail to Pirrama Road
- ◆ Minor installation works
 - Signage upgrades
 - Lighting upgrades
- ◆ Infrastructure upgrades
 - Services infrastructure upgrades
 - Transport and traffic improvements

MOD 13 INDICATIVE STAGING PROGRAMME

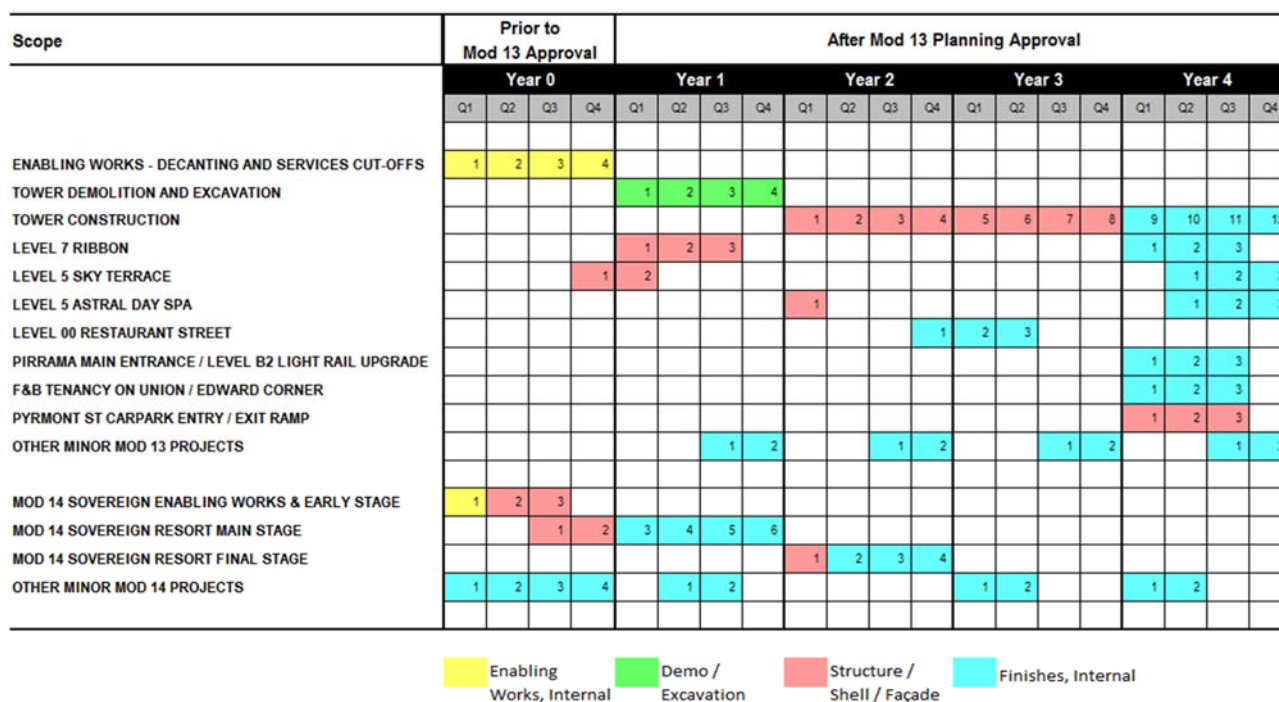


Figure 48 – Mod 13 – Indicative Staging Plan

Scheduled works to the level 5 sky terrace base, as shown in **Figure 48** as commencing “prior to Mod 13 Approval”, are limited to the creation of the base for Mod 14 Sovereign Resort footing works, approved under the relevant modification.

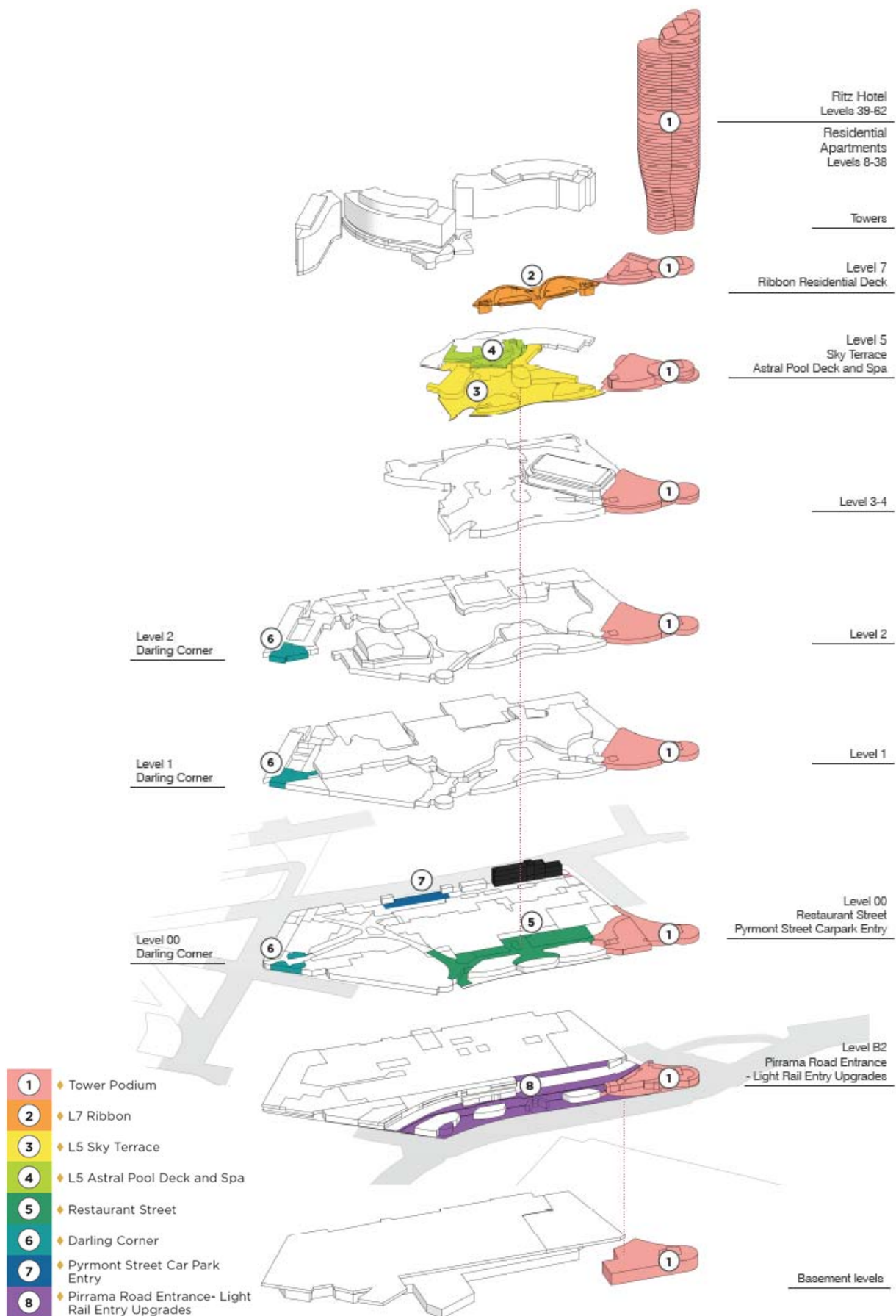


Figure 49 – Various Components of Mod 13

4.20 FOOD & BEVERAGE PREMISES

As part of Mod 13, numerous upgrades to existing F&B tenancies are proposed on some instances the spaces will be replaced by other works. The following provides a summary of the proposed changes to existing F&B premises as part of Mod 13:

- ◆ Pizzaperta, Level B2– demolished as part of Mod 13, and replaced with new tenancy – F& B Tenancy 1
- ◆ Balla and Black, Level 00 - internally demolished, to accommodate new internal fit-out works and integration with 'Restaurant Street'
- ◆ The Century, Level 00 – demolished as part of Mod 13
- ◆ Food Court, Level 00 – no change

Following commencement of the Sovereign expansion works approved under Mod 14 SEGL will surrender the following consents as the spaces will be demolished or significantly altered by the Mod 14 works.

Table 9 provides an overview of the F&B tenancies with their:

- ◆ current hours of operation and capacity (where relevant), and
- ◆ proposed hours of operation and capacity for new tenancies proposed under Mod 13.

Table 9 – Proposed Operation Hours for Restaurant Spaces

Level	Informal Description	Location	Current (under existing Approvals)		Proposed	
			Hours of Operation	Max Patrons	Hours of Operation	Max Patrons
B2	F&B 1 (near Pizzaperta)	Pirrama Rd South of main entry escalators	7am – 10pm	250 incl. outdoor	7am – 12am	250 incl. outdoor
B2	F&B 2 (current Pirrama entrance to Marquee)	Pirrama Rd North of main entry escalators	-	-	7am – 12 am	250 incl. outdoor
00	F&B 3 (Balla)	Restaurant Street South facing Pirrama Road	7am – 10pm + 10pm – 2am (5Y Trial)	185 seated	7am – 2am	190
00	F&B 4 (Black)	Restaurant Street North facing Pirrama Road	7am – 10pm + 10pm – 2am (5Y Trial)	180 seated	7am – 2am	265
00	F&B 5	Restaurant Street South of G-Star escalator	-	-	7am – 2am	40
00	F&B 6	Restaurant Street North of G-Star escalator	-	-	7am – 2am	240
00	F&B 7	Restaurant Street opposite Balla	-	-	7am – 2am	230
00	F&B 8	Restaurant Street opposite Black	-	-	7am – 2am	305
00	F&B 9	Restaurant Street adjacent to Jones Bay entrances	-	-	7am – 2am	320

			Current (under existing Approvals)		Proposed	
00	F&B 10 - Small Café	Jones Bay Road adjacent to Tower residential entrance	-	-	7am – 12am	45 incl. outdoor
00	F&B 11 - Social Enterprise Café	Neighbourhood Centre on Jones Bay Road	-	-	7am – 10pm	80
01-02	F&B 12 - Darling Corner Licensed Restaurant	Edward/Union Croner over 3 levels	-	-	7am – 3am (internal) 9am – 12am (Balcony)	320
05	F&B 13 - Level 5 Event Terrace Bistro	Level 5 Sky Terrace South	-	-	7am – 2am	350 incl. terrace
05	F&B 14 - Level 5 Sky Terrace Bar	Level 5 Sky Terrace South below Ribbon facing Pirrama Road	-	-	7am – 2am	330 incl. undercover
05	F&B 15 - Level 5 Sky Terrace Restaurant	Level 5 Sky Terrace North below Ribbon facing Pirrama Road	-	-	7am – 2am	330 incl. undercover
07	F&B 16 - Star Pool Bar	Level 7 Pool Terrace South facing Pirrama Road	-	-	7am – 2am	260 incl. undercover and pool edge
07	F&B 17 - Ritz-Carlton Pool Bar	Level 7 Pool Terrace North facing Pirrama Road	-	-	7am – 2am	260 incl. undercover and pool edge
39	F&B 18 - Hotel Bar	Ritz Carlton Sky Lobby	-	-	24/7	100
40	F&B 19 - Hotel Restaurant	Ritz Carlton Sky Lobby Mezzanine	-	-	24/7	100

4.21 SURRENDER OF CONSENTS

As part of Mod 13, it is proposed to consolidate the operational requirements of the following consents, where relevant in the Major Project Approval MO09_0098 and surrender the individual City of Sydney consents:

- ◆ D/2013/1259 (Pizzaperta).
- ◆ D/2011/19 (Balla).
- ◆ D/2011/18 (Black).
- ◆ D/2011/862 (Century).
- ◆ D/2011/19/A (Balla – extension of trial period).
- ◆ D/2011/19/B (Balla – extend trading hours).
- ◆ D/2011/18/A (Black – extension of trial period).
- ◆ D/2011/18/B (Black – extend trading hours).

The following consents are also proposed to be surrendered as these areas will be subsumed under Mod 13:

- ◆ D/2015/1826 (Sky Terrace Marquee & Lift).
- ◆ D/2012/1006 (L03 Pool Deck & L06 Plant Room Modification).
- ◆ D/2012/802 (the lighting of the MUEF).
- ◆ D/2016/48 was approved on 15 July 2016 and will not be constructed; the approved works will be subsumed as part of Mod 13. It is proposed to surrender this consent as well.

4.22 LAND ADMINISTRATION: SUBDIVISION

It is proposed that Lot 500 in DP 1161507, owned by ILGA and leased by SEGL, will be vertically subdivided to create five (5) stratum lots within the proposed Tower and Ribbon elements. The proposed lots are

- ◆ Lot 1 – Star Sydney (Existing Lot 500 minus Lots 2, 3, 4 & 5)
- ◆ Lot 2 – Hotel Stratum Lot
- ◆ Lot 3 – Residential Stratum Lot
- ◆ Lot 4 – Car Stacker Stratum Lot
- ◆ Lot 5 – Residual Stratum lot

The Draft Plan of Subdivision is provided at **Appendix BBB** and is supported by a clarifying document set that includes colour coded overlay information showing internal building layout and occupancy arrangements.

5 CONSULTATION

This section describes the consultation that has been undertaken by the project team during the preparation of this EAR. Consultation has been carried out with Government agencies, including DP&E, the City of Sydney (CoS) and ILGA as well as the relevant service providers, as required by the SEARs.

5.1 COMMUNITY CONSULTATION

SEGL implemented a program of stakeholder and community engagement activities throughout the development of its plans for Mod 13. SEGL is committed to ensuring that the neighbouring community and stakeholders are kept informed with respect to the project.

The community and stakeholder engagement strategy is described in detail within the Community Consultation Report at **Appendix I**. This report addresses the SEARs requirements in relation to consultation, specifically community consultation. The strategy targeted neighbours, stakeholders and the broader community to ensure they were appropriately informed and consulted in a coordinated and consistent way. To enable this, SEGL delivered engagement activities across the key stages of the development process (as shown in the diagram below).



SEGL prepared and delivered a development update to the community outlining its plans for the tower project and the Design Excellence Competition. It outlined the reasons for the project, its development partners and its commitment to engage with the community. The update provided information for the community about how to find out more details about the project. It contained the address for The Star's development microsite, and the 1800 number and email address for enquiries, the update was delivered between 16 to 20 September 2016 via letter box drop.

The Design Excellence Competition was the first formal engagement opportunity in relation to the proposed development plans. The engagement objectives for this phase were to:

- ◆ Introduce SEGL's proposed plans;
- ◆ Present the three alternative designs;
- ◆ Gain an understanding of key challenges and opportunities that could inform the design process; and
- ◆ Provide an opportunity for the community to contribute at early design stage.

Three separate sessions were held for stakeholders and peak bodies, community groups, and the local community on day two of the Design Excellence Competition. This included a Breakfast Briefing, a Community Panel Session, and a Community Open House Session.

A broad range of topics, issues and comments were covered during the briefings and community information sessions, and in the online survey. Key topics of concern included:

- ◆ Traffic, transport and parking;
- ◆ Height and scale of tower (including overshadowing);
- ◆ Noise and acoustics;
- ◆ Integration with Pyrmont/Darling Harbour (preservation of the heritage and character of the local area);
- ◆ View impacts;

- ◆ Social issues (i.e. anti-social behaviour);
- ◆ Construction issues; and
- ◆ Contribution to the community.

These key issues and the project responses have been summarised within the Community Consultation Report at **Appendix I**.

SEGL has kept its stakeholders, including the local community, neighbours and government authorities, up to date with the Proposal's progress throughout the development of its plans for Mod 13. Ongoing engagement activities include a dedicated email address and 1800 number for community members to find out information and ask questions, and the microsite that was launched on 15 September 2016 is regularly updated. The broader consultant team with representatives from SEGL has been consulting with key agencies and stakeholders nominated in the SEARs.

SEGL will continue to work closely with the community, including local community groups, regarding the neighbourhood space and potential uses. Development of a clear model around governance, and facilities management, including strategies for booking procedures, hire processes, fees, access, and maintenance will be undertaken. This could also include opportunities for advisory panel whose membership will reflect the local community including individual residents and community groups as well as workers in the area to assist SEGL in the management of the centre and to provide advice on the ongoing management and activities within the centre. This panel can include representation from local Council; and continue to engage with the community to keep the community informed on decisions to reduce risk and anxiety about the delivery of the facility. The advisory panel is yet to be established.

SEGL will continue to engage with stakeholders and the community during the public exhibition of Mod 13 and through the development of the Neighbourhood Centre advisory panel. The advisory panel will comprise six members who will represent local Pymont community groups, local residents and the local working community.

5.2 AGENCY AND STAKEHOLDER CONSULTATION

Table 10 describes the stakeholder consultation undertaken for Mod 13. The relevant stakeholders are those nominated in the SEARs and separately identified by the technical consultants.

Table 10 – Agency and Stakeholder Consultation Summary

Stakeholders	Actions
Department of Planning and Environment	<p>Engagement has occurred as outlined below:</p> <ul style="list-style-type: none"> ◆ Initial meeting with DP&E in December 2015 to discuss Mod 13 ◆ Urbis on behalf of SEGL submitted a request for SEARs on 17 December 2015 ◆ Mod 13 SEARs were issued by DP&E on 09 February 2016 ◆ SEGL and Urbis met with the DP&E to discuss the use of the Section 75W pathway, design excellence process and SEARs specific matters on 3 March 2016 ◆ SEGL and Urbis met with the DP&E to discuss Mod 13 & 14, specifically updating of SEARs, the scope of the design competition and the design excellence process on 9 May 2016 ◆ DP&E assumed the role of independent observer during the alternative design excellence process ◆ Urbis, FJMT and DWP presented the Proposal to DP&E on 11 April 2017 to discuss design development, key environmental assessments, external lighting, events management public benefit officer and condition
Commonwealth Department of Infrastructure and Regional Development	<p>Sydney Airport Corporation Limited (SACL) directed the application to various agencies including:</p> <ul style="list-style-type: none"> ◆ Air services Australia;

Stakeholders	Actions
	<ul style="list-style-type: none"> ◆ the Civil Aviation Safety Authority (CASA); and ◆ airlines operating out of Sydney Airport. <p>All agencies provided their responses and the application was forwarded to the Department of Infrastructure and Regional Development (DIRD) for final approval.</p> <p>Approval for penetration of 'prescribed airspace' was obtained from the Department of Infrastructure, Regional Development and Cities (the former DIRD) 22 March 2018.</p>
City of Sydney Council	<p>Engagement with the City of Sydney has occurred as outlined below:</p> <p>28 March 2016</p> <p>Preliminary Meeting.</p> <p>16 August 2016</p> <p>SEGL met with CoS on 16 August 2016 to discuss Mod 13 and public domain improvements.</p> <p>13 October 2016</p> <p>SEGL met with CoS (Graham Jahn) on 13 October 2016 to present an overview of The Star's masterplan, including providing an update on the Design Excellence Competition, the stakeholder engagement process and community consultation.</p> <p>17 October 2016</p> <p>SEGL and Mott MacDonald met with CoS on 17 October 2016 to provide an overview of the proposed traffic and access ungraded proposed for Mod 13 including Pyrmont Street Car Park Entry, proposed car stacking system, public domain, loading dock operations, taxi relocation and traffic generation. It was agreed that further consultation take place, as the design progresses.</p> <p>16 June 2017</p> <p>Subsequent engagement occurred with the City of Sydney on 16 June 2017, the following provides a summary of discussions:</p> <p>The following people from the CoS were in attendance:</p> <ul style="list-style-type: none"> ◆ Phil Dunne (City of Sydney – Public Domain). ◆ Bridget McNamara (City of Sydney – Planning). ◆ Chris Corradi (City of Sydney – Planning). ◆ Allison Heller - Community Centres & Social Impact Unit (City of Sydney). ◆ Van Le - Traffic Manager (City of Sydney). ◆ Julia Davis- Urban Design Unit (City of Sydney). <p>Public Domain:</p> <ul style="list-style-type: none"> ◆ . During the design process of the landscape design, City of Sydney (Phil Dunne) was consulted on multiple occasions which guided the public domain design outcomes. These outcomes were: <ul style="list-style-type: none"> ◆ Upgraded footpath finishes to Pirrama Road and Jones Bay Road would create a better pedestrian experience, and a visually improved outcome. ◆ Existing street trees on Pirrama Road and Jones Bay Road would create a better pedestrian experience, and a visually improved outcome. ◆ Existing street trees on Pirrama Road (<i>Livistona australis</i> & <i>Ficus sp.</i>) do not match Council's Street Tree Master Plan (STMP) and can be replaced with species that match the STMP to provide equal/improved public amenity with the new species (<i>Angophora Costata</i>).

Stakeholders	Actions
	<ul style="list-style-type: none"> ◆ Council are comfortable that proposed upgraded public domain finishes don't match the current Council guidelines and that this precinct will undergo future planning with revised public domain guidelines which would have upgraded finishes as similar to Urbis' design. ◆ Council agree with the improved vehicular and pedestrian circulation on Pirrama Road which creates a safer and more functional entrance to the light rail station. <p>Traffic:</p> <ul style="list-style-type: none"> ◆ SEGL and project team met with Traffic Manager to discuss the proposed traffic and access improvements associated with Mod 13, comments were provided and consider. Continued offline discussions are occurring between SEGL, Mott MacDonald and Traffic Unit. <p>Social Planning & Neighbourhood Centre:</p> <ul style="list-style-type: none"> ◆ SEGL have undertaken initial consultation with the City of Sydney on the 16 June 2017, continued consultation in respect to social planning matters will be ongoing with the Research Strategy & Corporate Planning Division of Council to discuss the Social Impact Assessment and proposed Neighbourhood Centre. <p>Heritage:</p> <ul style="list-style-type: none"> ◆ 14 June 2017: Urbis contact John Poulton, Heritage Specialist at the City of Sydney Council to ascertain requirements to meet before lodgement of the application. On 14 June 2017 John contacted Urbis via email and confirmed that a pre-lodgement meeting to discuss built heritage was not required at that point.
Roads and Maritime Services (RMS)	A meeting was held with RMS on 05 November 2017. Mathew Stephens (Mott Macdonald) presented the key findings of the traffic assessment relating to Mod 13. Refer to the meeting minutes provided with the TIS at Appendix J .
Transport for NSW	<p>A meeting was held with the TfNSW CBD Coordination Office on 12 July 2017. Mathew Stephens (Mott Macdonald) presented the key findings of the traffic assessment relating to Mod 13.</p> <p>It was agreed that TfNSW would provide details of contacts at Sydney Buses. Refer to the meeting minutes provided along with the Traffic Impact Statement at Appendix J.</p>
Transdev (Sydney Light Rail)	A meeting with Transdev, the applicant, and the traffic consultant occurred on 02 August 2017. The meeting minutes are provided within the appendices of the Traffic Impact Statement at Appendix C .
Sydney Trains	The application will be referred to Sydney Trains for comment during the notification public period.
Office of Liquor, Gaming and Racing (OLGR)	Refer to note below relating to consultation with ILGA, following consolidation of ILGA and OLGR on 1 February 2016.
Heritage Council	Urbis contacted the NSW Heritage Council on 30 March 2017 in order to ascertain requirements to meet with the former before lodgement of the application. On 22 June 2017 Shikha Jhaldiyal from the NSW Office of Environment and Heritage confirmed (phone correspondence) that a pre-lodgement meeting to discuss built heritage was not required. The Proposal will be referred to the NSW Heritage Council for comment during the public notification period.
Sydney Water	An application has been made to Sydney Water for increased water supply and sewer discharge capacity. The feasibility letter response was received from Sydney Water on 3rd March 2016, further detail is provided in Section 9 .

Stakeholders	Actions
	<p>The letter notes that the proponent will be required to apply to Sydney Water for a Section 73 Certificate after development approval is granted.</p> <p>The correspondence is provided at Appendix A of the Hydraulic Infrastructure Report, which is provided at Appendix BB.</p>
AUSGRID	<p>Umow Lai submitted an application on 29 September 2016 requesting Ausgrid to undertake a detailed planning study of 4 options to upgrade the site supply capacity from 12.2 MVA to 17.5 MVA to accommodate the proposed works.</p> <p>Ausgrid's response to the application was received on 26 June 2017, providing two options for consideration, including:</p> <ul style="list-style-type: none"> ◆ New 33kV feeders from Pymont Static Transfer Switch (STS) ◆ New 11kV feeders from Darling Harbour zone substation and upstream 11kV network augmentation <p>SEGL is undertaking a review of the proposed options with consideration to buildability, operational disruption and suitability to the ongoing requirements of the proposed development.</p> <p>The correspondence is provided as an attachment to the Electrical Infrastructure Report at Appendix AA.</p>
Jemena	<p>As confirmed by Umow Lai in the Hydraulic Infrastructure Report at Appendix BB, discussions with Jemena have commenced regarding increased gas supply capacity. Jemena have indicated that the increased demand can be met, and noted that:</p> <ul style="list-style-type: none"> ◆ There are a number of large gas users commencing supply next year, specifically Darling Harbour and Barangaroo Central Plant; ◆ A major network reinforcement project is currently underway from Alexandria to Darlington that will increase high pressure gas capacity in the local network; and ◆ The future revenue generated for Jemena from the proposed gas demand would likely offset any capital upgrade works. <p>Jemena have requested details of natural gas demands, with the staged increase over the development program. This will be provided to Jemena once the decision has been made on the power supply for the site (Gas Generators vs HV electrical supply) as per consultation with Ausgrid detailed above.</p>
Local heritage group(s) and Local Aboriginal Land Council and relevant stakeholders	<p>Local Heritage Groups:</p> <p>3 April 2017: Pymont History Group was invited to comment on the proposed design. The group provided a response on 4 May 2017 which stated that they generally support the development, particularly if all efforts are taken to preserve the heritage assets that remain on site.</p> <p>Aboriginal Stakeholders:</p> <p>It is noted that at this stage of the project there is no formal requirement for consultation, as the Aboriginal Cultural Heritage Consultation Requirements for Proponents (ACHCRs) have not been triggered. SEGL has elected to engage in formal consultation in accordance with recommendations received from Urbis Heritage, to ensure that all relevant stakeholders are provided with the opportunity to be involved in the project going forward. The following consultation has occurred:</p> <ul style="list-style-type: none"> ◆ 22 June 2016: Letters were sent to the relevant organization identified in the ACHCRs 2010. ◆ 13 July 2016: Notification was placed in the Koori Mail newspaper inviting any Aboriginal people who hold cultural knowledge and wish to be consulted for the assessment to register an expression of interest. ◆ 13 July 2015: OEH identified a total of 34 relevant stakeholders who were

Stakeholders	Actions
	<p>contacted via email and/or post.</p> <p>As a result of the above, a total of ten stakeholders registered an interest in the project as per the list below:</p> <ul style="list-style-type: none"> ◆ 7 July 2016: Kamilaroi-Yankuntjatjara Working Group ◆ 11 July 2016: Darug Land Observation Pty Ltd ◆ 13 July 2016: Metropolitan Local Aboriginal Land Council ◆ 18 July 2016: Tocomwall Pty Ltd ◆ 18 July 2016: Aboriginal Archaeology Service Inc ◆ 19 July 2016: Darren John Duncan ◆ 25 July 2016: Darug Aboriginal Cultural Heritage Assessments ◆ 25 July 2016: Gudungurra Tribal Technical Services ◆ 25 July 2016: Minnamunnung ◆ 28 July 2016: Butucarbin Aboriginal Corporation <p>As noted in the Aboriginal and Historical Archaeological Assessment at Appendix O, as no impacts to Aboriginal cultural heritage have been identified, no further consultation with the identified Aboriginal community stakeholders is required.</p>
Independent Liquor and Gaming Authority (ILGA)	<p>SEGL presented the works associated with Mod 13 for the site to ILGA on 30 May 2017, the Proposal was positively received.</p> <p>ILGA has since provided owner's consent for SEGL for the purpose of formal lodgement of Mod 13. Refer to the owner's consent letter at Appendix TT.</p>
Environmental Protection Agency (EPA)	The Proposal does not constitute a scheduled activity under Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> .
Department of Primary Industries – Water	Engagement has occurred with the DPI Water in relation to Mod 14 and the Harbour Heat Rejection (HHR) System, which was designed to accommodate both Mod 14 and Mod 13. No further physical works are proposed to the HHR system as part of Mod 13.
NSW Police – Local Area Command	<p>Preliminary discussions occurred with Sydney City Local Area Command on 17 October 2017 and no concerns were raised with the Proposal.</p> <p>Further information including the Traffic Impact Statement, the Car Stacker Management Plan and the CPTED report have been provided to the Crime Prevention Officer at the Sydney City Local Area Command for reference.</p> <p>Any comments, when received from the LAC will be provided to the DP&E.</p>
Fire and Rescue NSW	<p>Fire and Rescue NSW (FRNSW) will be consulted as part of the fire engineering process.</p> <p>A Fire Engineering Brief Questionnaire (FEBQ) was submitted to the Fire Brigade on 15 September 2017, and a response received on 16 October 2017.</p> <p>Refer to a copy of the FEB Questionnaire that was submitted to the Fire Brigade and their responses at Appendix X as part of the Fire Protection Assessment prepared by WSP.</p>
Sydney Buses	The application will be referred to Sydney Buses for comment during the notification public period.
Sydney Airport Corporation Ltd (SACL)	On 13 March 2017, an application to Sydney Airport Corporation Ltd (SACL) was submitted to allow the tower and cranes to penetrate Sydney Airport Prescribed

Stakeholders	Actions
	<p>Airspace and increase the height of the radar terrain clearance chart (RTCC) surface above the proposed development.</p> <p>Based on interviews with representatives from SACL, the proposed development will not restrict or present a safety hazard to aircraft or helicopter operations.</p>
Airservices Australia	<p>On 23 November, Thompson GCS submitted an application to Airservices Australia for assessment of the proposed development and associated crane operations. Airservices Australia responded on 15 March 2017 confirming that the Proposal would not adversely impact the performance of communications, navigation and surveillance facilities or airspace procedures.</p> <p>Refer to the correspondence provided within the Airspace Application and Assessment at Appendix S.</p>
Civil Aviation Safety Authority (CASA)	<p>On 22nd December 2017 CASA provided advice to the Department of Infrastructure and Regional Development (DIRD) about the building and crane height requests. They advised that the proposed building height of 237.0m AHD would have no impact on aircraft operations. To enable crane operations to a maximum height of 285m AHD, CASA recommended that the 335m AHD RTCC contour be extended in a westerly direction to encompass the position of the cranes associated with the development at 20-80 Pyrmont Street. CASA require that the building and cranes to be lit. Subsequent approval from DIRD for the controlled activity was issued on 22 March 2018.</p> <p>Refer to details within the Airspace Application and Assessment and the DIRD Building Approval at Appendix S.</p>

6 STATUTORY CONTEXT

As required by the SEARs, the following legislation and environmental planning instruments have been addressed as they apply, or as if they were to apply, to the Proposal and the modification of the Project Approval.

- ◆ *Environmental Planning and Assessment Act 1979*;
- ◆ *Environmental Planning and Assessment Regulations 2000*;
- ◆ State Environmental Planning Policy (State & Regional Development) 2011;
- ◆ State Environmental Planning Policy No 55 – Remediation of Land;
- ◆ State Environmental Planning Policy (Infrastructure) 2007;
- ◆ State Environmental Planning Policy no. 64 – Advertising and Signage;
- ◆ State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development;
- ◆ State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004;
- ◆ Draft State Environmental Planning Policy (Environment) 2017;
- ◆ Sydney Regional Environmental Plan (Sydney Harbour Catchment);
- ◆ Sydney Local Environmental Plan 2012;
- ◆ State Environmental Planning Policy (Coastal Management) 2018; and
- ◆ Draft Remediation of Land State Environmental Planning Policy.

The Proposal has been considered against the following Development Control Plans:

- ◆ Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005;
- ◆ Sydney Development Control Plan 2012; and
- ◆ City of Sydney Development Contributions Plan 2015.

6.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

6.1.1 Part 3A of the Environmental Planning and Assessment Act 1979

As part of the repeal of Part 3A of the EP&A Act, Schedule 6A of the EP&A Act was enacted to allow the application of the repealed Part 3A provisions to certain projects that had been approved or were in the process of environmental assessment under Part 3A. These projects are known as “Transitional Part 3A projects” and such projects may be modified under the modification framework set out in the repealed section 75W of the EP&A Act, as if it were in force.

Major Project No. 08_0098 was approved on 7 January 2009 by the Minister for Planning and is a Transitional Part 3A Project.

It is noted that the *Environmental Planning and Assessment Amendment Bill 2017* was passed by the Legislative Council and Legislative Assembly, and assented to on 23 November 2017.

The existing transitional arrangements for Part 3A were moved out of the EP&A Act into a new Regulation, the *Environmental Planning and Assessment (Saving, Transitional and Other Provisions) Regulation 2017*. Section 75W remains in force by operation of clause 3BA of schedule 2 of the *Environmental Planning and Assessment (Saving, Transitional and Other Provisions) Regulation 2017*. Accordingly, modification of MP08_0098 is sought under section 75W of the EP&A Act.

6.1.2 Section 75W Modification of Project Approval

Section 75W of the EP&A Act provides a mechanism by which the proponent of a Part 3A project may request the modification of, and by which the Minister may modify, that project.

Section 75W(2) of the EP&A Act sets out the right of a proponent to request a modification:

“The Proponent may request the Minister to modify the Minister’s approval for a project. The Minister’s approval for a modification is not required if the project as modified will be consistent with the existing approval under this Part.”

Section 75W(4) of the EP&A Act then provides the Minister with the power to “*modify the approval (with or without conditions) or disapprove of the modification.*”

The Minister has the power to make the proposed modifications to MP08_0098 under Mod 13 because section 75W(4) confers upon the Minister a broad power to modify a Major Project approval. Under the defined terms in section 75W(1), modifying an approval can include ‘changing the terms of’ an approval. The EP&A Act does not set out any express statutory limitation upon the nature or extent of the change that is permitted to be made under section 75W.

As demonstrated in **Section 9**, the proposed works under Mod 13 have limited environmental impacts beyond those already assessed for the Approved Project. It is considered that it is open to the Minister to modify the Approved Project under the provisions of the EP&A Act and associated regulations that preserve the application of section 75W, so as to authorise the Proposal as described in this EAR.

6.1.3 Permissibility of Residential Uses

The site is located on land zoned B3 Commercial Core under the Sydney Local Environmental Plan 2012 (SLEP 2012). Hotel accommodation, entertainment facilities, commercial premises and restricted premises are permissible land uses in the zone. However, development for the purposes of residential accommodation is prohibited.

It is noted that the general position regarding the approval of Part 3A projects is that environmental planning instruments (EPIs), such as the SLEP 2012, do not apply to or in respect of an “approved project” under Part 3A (as set out in section 75R of the EP&A Act). This is qualified by section 75J(3), which provides that the Minister has a discretion to consider EPIs (which would otherwise not be required to be considered and applied because of section 75R), when deciding whether or not to approve the carrying out of a project.

Clause 8O(1)(b) in Schedule 4 of the EP&A (Savings, Transitional and Other Provisions) Regulation 2017 provides that for the purposes of section 75J(3), approval for the carrying out of a Part 3A project cannot be given if the project (or any part of it) would be prohibited by an EPI that does not (because of section 75R) apply. However, neither sections 75J and 75R of the EP&A Act, nor clause 8O of the EP&A Regulation, apply to the modification of Part 3A projects. Instead, the Minister’s power to modify Part 3A approvals is a standalone power, identified solely by reference to the provisions of section 75W.

Operating in this different context, section 75W affords the Minister a broad discretion to approve or disapprove of a request to modify a Part 3A approval and, as explained in the judgement in *Barrick Australia Ltd v Williams* (2009) 74 NSWLR 733, the decision of whether a proposed alteration to an existing approval is properly considered a “modification”, and within the bounds of section 75W, is one to be made by the Minister that is reasonably open in the circumstances.

Unlike the modification of a Part 4 approval under section 4.55 (formerly section 96) of the Act, a modification under section 75W is not required to result in “substantially the same development”. Instead, the constraints on the Minister’s discretion are only those expressed, or properly inferred, in the words of section 75W itself.

This position has not been altered by the recent decision in *Billinudgel Property Pty Ltd v Minister for Planning* [2016] NSWLEC 139, (2016) 221 LGERA 1 (*Billinudgel*). The facts in that case are distinguishable from Mod 13 on two grounds. Firstly, *Billinudgel* involved a concept plan approval, whereas Mod 13 involves a project approval. Secondly, in *Billinudgel*, the proposed modification involved the removal of a condition that was at the very heart of the purpose of the concept plan approval.

Although Mod 13 proposes changes to the character and extent of the Approved Project, it does not involve anything that proposes to alter the heart of the purpose of the Approved Project. It is considered that neither the height of the proposed new tower nor the inclusion of residential apartments in the tower, within a mixed-use development, are

changes to the Approved Project that are outside the matters that the Minister could reasonably consider to be a modification of an existing Part 3A project approval.

Accordingly, it is reasonably open to the Minister to approve the modification of the Approved Project under section 75W of the EP&A Act to reflect the proposed development set out in this EAR.

6.2 STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) identifies various types of development and particular sites upon which certain development is defined as State significant development (SSD).

Schedule 1 of the SRD SEPP identifies certain development (based on minimum capital investment value (CIV) and specified uses) as SSD. Clause 13 (1) states the following:

13 Cultural, recreation and tourist facilities

(1) *Development that has a capital investment value of more than \$30 million for any of the following purposes:*

- (a) *film production, the television industry or digital or recorded media,*
- (b) *convention centres and exhibition centres,*
- (c) *entertainment facilities,*
- (d) *information and education facilities, including museums and art galleries,*
- (e) *recreation facilities (major),*
- (f) *zoos, including animal enclosures, administration and maintenance buildings, and associated facilities.*

(2) *Development for other tourist related purposes (but not including any commercial premises, residential accommodation and serviced apartments whether separate or ancillary to the tourist related component) that*

- (a) *has a capital investment value of more than \$100 million, or*
- (b) *has a capital investment value of more than \$10 million and is located in an environmentally sensitive area of State significance or a sensitive coastal location.*

The proposed development has a CIV of \$581,703,576 million (refer to QS Report at **Appendix SS**), and would be categorised as development for tourist related purpose.

However, the proposed development is not proposed as and will not be assessed as SSD under the Division 4.1 of the EP&A Act because the Proposal is a modification of a Project Approval under section 75W of the EP&A Act as a 'Transitional Part 3A Project'

6.3 STATE ENVIRONMENTAL PLANNING POLICY NO. 55 – REMEDIATION OF LAND

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) is the primary environmental planning instrument guiding the remediation of contaminated land in NSW. SEPP 55 requires a consent authority to consider whether the land is contaminated, and if so, whether the land will be remediated before the land is used for the intended purpose.

Contamination has been addressed in detail under Environmental Assessment in **Section 9** of this EAR. For the purpose of the considerations under SEPP 55, the site has been fully remediated and there is a low likelihood of significant contamination to be found during construction

Further, the area of significant site disturbance as part of Mod 13 is limited to the tower location in the northern portion of the site which has been confirmed to contain no adverse levels of contamination.

6.4 STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to facilitate the effective delivery of infrastructure across the State. The ISEPP identifies matters for consideration in the assessment of development adjacent to particular types of infrastructure development, including all new development that generates large amounts of traffic in a local area.

The currently Approved Project on the site is “traffic generating development” under Schedule 3 of the ISEPP. Accordingly, it is anticipated that DP&E will notify the application to RMS and take into consideration any submission received from RMS.

The traffic generation of the existing and proposed development has been assessed in the Traffic Impact Statement prepared by Mott MacDonald included at **Appendix J** and in **Section 9** of this EAR.

6.5 STATE ENVIRONMENTAL PLANNING POLICY NO. 64 – ADVERTISING AND SIGNAGE

State Environmental Planning Policy No. 64 Advertising and Signage (SEPP 64) aims to ensure that signage is compatible with the desired amenity and visual character of an area, communicates the message effectively and is of high quality design and finish.

The relevant provisions of SEPP 64 as they relate to the signage plans and package of works are addressed at **Section 9** of this EAR.

6.6 STATE ENVIRONMENTAL PLANNING POLICY NO. 65 – DESIGN QUALITY OF RESIDENTIAL APARTMENT DEVELOPMENT

The State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development (SEPP 65) aims to improve the design quality of residential apartment development in NSW and provides Design Quality Principles to guide apartment development in NSW. SEPP 65 is accompanied by the Apartment Design Guide (ADG) which provides objectives, design criteria and design guidance set out in Part 3 and 4 of that document for the following:

- ◆ Visual privacy;
- ◆ Solar and daylight access;
- ◆ Common circulation and spaces;
- ◆ Apartment size and layout;
- ◆ Ceiling heights;
- ◆ Private open space and balconies;
- ◆ Natural ventilation; and
- ◆ Storage.

The proposed apartments within the tower have been designed to achieve a high degree of compliance with the SEPP 65 design principles and the objectives within Part 3 & 4 of the ADG, as detailed in the Architectural Design Statement prepared by FJMT, provided at **Appendix C**, and **Section 9** of this EAR.

A SEPP 65 Verification Statement has been prepared by FJMT and is provided at **Appendix C**.

6.7 STATE ENVIRONMENTAL PLANNING POLICY (BUILDING SUSTAINABILITY INDEX: BASIX) 2004

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 aims to ensure consistency in the implementation of the BASIX scheme throughout New South Wales.

Under the definitions in the *EP&A Regulation*, the proposed development is a ‘BASIX affected development’ because it involves the erection of a BASIX affected building containing dwellings.

BASIX certificates and BASIX stamped floor plans for the relevant levels of the tower are provided at **Appendix Z**, and confirm that the minimum BASIX requirements are met for each residential unit proposed in the Ritz-Carlton Tower.

6.8 DRAFT STATE ENVIRONMENTAL PLANNING POLICY (ENVIRONMENT) 2017

The draft State Environmental Planning Policy (Environment) 2017 (Environment SEPP) aims to consolidate seven environmental existing SEPPs, including the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Harbour SREP). The consolidation will modernise provisions to remove duplication, respond to new evidence, changed circumstances and better align with community expectations.

The draft SEPP will result in a new Ministerial 117 Direction for preparing LEPs in the Hawkesbury Nepean, Georges River and Sydney Harbour catchments.

The Explanation of Intended Effect (EIE) for the Environment SEPP was on exhibition from 31 October 2017 until 31 January 2018, and the submissions are currently being considered by DP&E.

The EIE states that the policy intent of the existing Harbour Regional Environmental Plan will continue, with the following updates to the aims of the plan to better reflect the current use and needs of the Harbour:

- ◆ The emphasis on public accessibility to and along the foreshore and within the waterways themselves, and on the protection and enhancement of the natural and scenic qualities will be retained, as will the emphasis on the unique identity and cultural significance of Sydney Harbour.
- ◆ The aims relating to the importance of the Harbour and its natural features as a public asset of national and international significance will be carried forward and the aims will continue to require consent authorities to give precedence to the public good and to prioritise the protection of the natural assets of the Harbour.
- ◆ The aims related to catchment management and water quality will be transferred to a new 'Catchments' section in the Environment SEPP where the generic catchment management and water quality and water quantity provisions from SEPP (Sydney Drinking Water Catchment), the Harbour Regional Environmental Plan, Georges River Regional Environmental Plan and Hawkesbury Nepean Regional Environmental Plan will be consolidated.
- ◆ It is proposed to amend aim 1(d) of the Harbour Regional Environmental Plan to clarify that the 'working harbour' includes a range of recreational, transport, tourism and commercial uses. This reflects the changes to Sydney Harbour in recent years that has seen a shift away from traditional industrial and heavy shipping uses to a more modern working harbour. The provisions will continue to provide a framework that balances development for these uses against the values of the harbour as a public asset and the need for public access to the waterways and foreshores.

Mod 13 will align with the policy intent and the updated aims of the plan as it will improve the interface of the existing development with the waterfront through improved connectivity from the Level B2 Transport Interchange for members of the public. In addition, Mod 13 will not result in any impacts to the marine ecology and biodiversity of Sydney Harbour.

The existing Harbour SREP planning principles have been considered below in **Section 6.9** below.

6.9 SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Harbour SREP) provides planning principles for development within the Sydney Harbour Catchment area. The Star falls within this area. This EPI is supplemented by the Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005, which provides detailed design guidelines for development to which it applies.

The aims of the Harbour SREP are:

- (a) *to ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected, enhanced and maintained:*
 - (i) *As an outstanding natural asset, and*
 - (ii) *as a public asset of national and heritage significance, for existing and future generations,*

- (b) to ensure a healthy, sustainable environment on land and water,
- (c) to achieve a high quality and ecologically sustainable urban environment,
- (d) to ensure a prosperous working harbour and an effective transport corridor,
- (e) to encourage a culturally rich and vibrant place for people,
- (f) to ensure accessibility to and along Sydney Harbour and its foreshores,
- (g) to ensure the protection, maintenance and rehabilitation of watercourses, wetlands, riparian lands, remnant vegetation and ecological connectivity,
- (h) to provide a consolidated, simplified and updated legislative framework for future planning.

The relevant aims and provisions of these instruments are addressed under **Section 9** of this EAR in relation to Visual Impact and Marine Ecology.

6.9.1 Matters for Consideration

Division 2 of Part 3 of the Harbour SREP outlines particular matters to be taken into consideration by consent authorities when assessing development under Part 4 of the EP&A Act, or by public authorities before carrying out activities under Part 5 of the EP&A Act.

While these matters are not relevant to Part 3A Projects, they have been considered as set out in **Table 11** below.

Table 11 – Harbour SREP clauses

Clause	Comment/Compliance
Clause 20 General	This clause requires a consent authority for Part 4 development, or public authority for Part 5 development, to consider the matters set out in clauses 21 to 27 below.
Clause 21 Biodiversity, ecology and environment protection	There are no works proposed as part of Mod 13 that are likely to have an impact on biodiversity and ecology, including marine ecology. This has been addressed in detail under Section 9.35 .
Clause 22 Public access to, and use of foreshores and waterways	The proposed modification will not restrict access to and from the foreshore and waterways.
Clause 23 Maintenance of a working harbour	The proposed modification will not impact on the operation of the Harbour.
Clause 24 Interrelationship of waterways scenic quality	The Visual Impact Assessment at Appendix H concludes that the subject site is not located such that it is likely to affect heritage items identified within the Harbour SREP. View Impacts of the Proposal are considered in detail within the Visual Impact Assessment.
Clause 25 Foreshore and waterway scenic quality	The Visual Impact Assessment at Appendix H concludes that the subject site is not located such that it is likely to affect heritage items identified within the Harbour SREP. View Impacts of the Proposal are considered in detail within the Visual Impact Assessment.
Clause 26 Maintenance, protection and enhancement of view	The Visual Impact Assessment at Appendix H concludes that the subject site is not located such that it is likely to affect heritage items identified within the Harbour SREP. View Impacts of the Proposal are considered in detail within the Visual Impact Assessment.

6.9.2 Sydney Harbour Foreshores Area Development Control Plan 2005

The Harbour SREP is supported by detailed provisions contained within the Foreshores and Waterways Development Control Plan 2005 (FWDGP 2005). With regards to views and visual impact, the following must be considered:

◆ 3.2 General Aims

Minimise any significant impact on views and vistas from and to:

- *public places,*
- *landmarks identified on the maps accompanying the DCP, and*
- *Heritage items;*

Under the definitions within the Harbour SREP, the Proposal would be identified as a Land Based Development, which would require consideration of the provisions identified in Section 5 of the FWDCP 2005. Of these, the following are considered relevant to views and visual impact.

◆ 5.3 Siting of Buildings and Structures

- *buildings should not obstruct views and vistas from public places to the waterway;*
- *buildings should not obstruct views of landmarks and features identified on the maps accompanying this DCP*

◆ 5.4 Built Form

- *where buildings would be of a contrasting scale or design to existing buildings, care will be needed to ensure that this contrast would enhance the setting*

A detailed Visual Impact Assessment (**Appendix H**) has been undertaken by Architectus to assess if any views are impacted and determine if they can be managed. The outcome of this assessment is discussed in detail in **Section 9.3**.

6.10 STATE ENVIRONMENTAL PLANNING POLICY (COASTAL MANAGEMENT) 2018

State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP) commenced on 3 April 2018.

The aim of the policy is to *'promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with the objects of the Coastal Management Act 2016, including the management objectives for each coastal management area, by:*

- (a) managing development in the coastal zone and protecting the environmental assets of the coast, and*
- (b) establishing a framework for land use planning to guide decision-making in the coastal zone, and*
- (c) mapping the 4 coastal management areas that comprise the NSW coastal zone for the purpose of the definitions in the Coastal Management Act 2016'*

The site is identified as 'coastal environment area' and 'coastal use area' under the Coastal Management SEPP.

Clause 13 of the Coastal Management SEPP contains provisions relating to development on land within the coastal environment area and clause 14 contains provisions relating to development on land within the coastal use area. Those clauses, as well as the general controls contained in clauses 15 and 16 of the Coastal Management SEPP, place restrictions on the grant of development consent unless the consent authority is satisfied in relation to nominated matters and certain preconditions are met.

Clause 13(3) and clause 14(2) state that clause 13 and 14 (respectively) do *...not apply to land within the Foreshores and Waterways Area within the meaning of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (the Harbour SREP).

As identified in **Section 6.5** above the Harbour SREP identifies the site as being located within the 'Foreshores and Waterways Area Boundary'. Therefore, clause 13 and 14 do not apply to the Proposal or the site.

Clause 15 of the Coastal Management SEPP requires the consent authority to be satisfied that the Proposal is not likely to cause increased risk of coastal hazard on the site or other land. The Proposal involves excavation within the site

adjacent to the existing basement car parking area, to accommodate the proposed car stacker. All excavation will be into rock and is contained within the site boundaries. The Proposal will not increase the risk of coastal hazards on the site or adjoining land the Proposal is infill development on an existing urban site that is removed from the harbour. Further, the Geotechnical Assessment undertaken for the site (**Appendix PP**) has assessed the suitability of the site to accommodate the Proposal and provides recommendations in relation to footing design, excavation retention, rock face support, excavation induced ground movements, and lateral restraint to protect the site, adjoining land and to achieve required support for the Proposal. No excavation is being undertaken adjacent to the harbour foreshore.

The excavation associated with the basement car stacker has been engineered to take into account the Proposal and the sites existing geotechnical and locational attributes.

Clause 16 requires the consent authority to take into consideration the provisions of any certified coastal management program that applies to the site. No certified coastal management program applies to the site. In the absence of a certified coastal management program, it is noted that more generally, a Flood Impact Assessment (**Appendix DD**) has been undertaken for this site which states:

- ◆ *“There have been no recorded flooding incidents at the site location;*
- ◆ *To mitigate flood hazard and flood risk, upgrades are proposed to the existing stormwater pits and pipes;*
- ◆ *The proposed mitigation works reduce the 100-year ARI flood depth; reducing flood risk to the development, adjacent properties and the general public. The proposed works will have a positive environmental impact with regards to flood risk”.*

6.11 DRAFT REMEDIATION OF LAND STATE ENVIRONMENTAL PLANNING POLICY

As part of the NSW Government’s review program for existing State Environmental Planning Policies (SEPPs), DP&E publicly exhibited the draft Remediation of Land SEPP and draft planning guidelines (the draft Remediation of Land SEPP) between 31 January and 13 April 2018.

The draft Remediation of Land SEPP presents proposed changes to SEPP 55 and relates to remediation of contaminated land as well as matters to be addressed in a plan of remediation.

Clause 17 is proposed to be expanded to require a copy of any environmental management plan be supplied to the consent authority.

Clause 20 will provide new transitional provisions. These transitional provisions will ensure that remediation work for which notice has been given is not affected when the new SEPP commences.

As described under **Section 9.39**, the Proposal will satisfy the requirements of the draft Remediation of Land SEPP because:

- ◆ A section 35 Revocation Notice (Revocation Notice 379) was issued by the EPA on 13 May 1994, confirming that **Lot 122 in DP 828957** (former Pyrmont Power Station site – the western portion of the site) had been remediated in accordance with acceptable limits for medium density residential housing purposes.
- ◆ **Lot 121 in DP 828957 (former Switching Station Site – southern corner of the site):** A Phase 1 Contamination Assessment was provided as part of MP08_0098 confirming that the potential for contamination associated with the site for a commercial land use is likely to be generally low.
- ◆ **State Rail Authority (SRA) Site – eastern portion of the site:** DA 33/94 was accompanied by a report by AGC Woodward Clyde (February 1994) that concluded that the SRA site contains no adverse levels of contamination and that based on the results of the site investigation and the health risk assessment, there does not appear to be any need to remediate the site for development to commercial/industrial or medium density residential development.
- ◆ The area of site disturbance to accommodate the Ritz Carlton Tower under Mod 13 is limited to the northern portion of the site which has been confirmed to contain no adverse levels of contamination.

6.12 SYDNEY LOCAL ENVIRONMENTAL PLAN 2012

Section 75R (3) of the EP&A Act states that *environmental planning instruments (other than State environmental planning policies) do not apply to or in respect of an approved project.*

Consequently, the provisions of SLEP 2012 do not apply to Major Project Approval MP08_0098. Notwithstanding this, as required by the SEARs, this EAR considers the provisions of SLEP 2012 as it would otherwise apply to The Star and Mod 13.

Table 12 – Sydney LEP 2012

Control	Comment/Compliance
Land use and permissibility	<p>Under the provisions of SLEP 2012, the site is zoned B3 Commercial Core, with the following objectives:</p> <ul style="list-style-type: none"> ◆ <i>To provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and wider community;</i> ◆ <i>To encourage appropriate employment opportunities in accessible locations;</i> ◆ <i>To maximise public transport patronage and encourage walking and cycling; and</i> ◆ <i>To promote uses with active street frontages.</i> <p>The Star is consistent with the zone objectives in that:</p> <ul style="list-style-type: none"> ◆ A wide range of retail, F&B, and entertainment offerings are available within The Star Sydney Complex. Subject to compliance with licencing rules the facilities are available to service the needs of the local and wider Sydney community; ◆ The Star on the whole acts as a destination for many local, interstate and overseas visitors; ◆ The range of operations functioning within The Star provides for a range of employment opportunities on a 24 hour per day, seven day per week basis; ◆ The Star is accessible by private transport (car, bike and walking) but also by public transport with both bus, ferry and light rail facilities available adjacent to or on site, and the site is a short walk from the Pyrmont Ferry Wharf; and ◆ There are several F&B offerings fronting the streets surrounding The Star which provide the site with an architecturally attractive and visually active street frontage. <p>In addition, the development Proposal under Mod 13 will further these objectives because it will:</p> <ul style="list-style-type: none"> ◆ Provide high quality restaurant spaces and entertainment areas associated with the Ribbon; ◆ Incorporate a 6-star hotel on the site enhancing the tourist and visitor accommodation choice in Sydney; ◆ Enhance the light rail station interface and its connection with the site and local area, encouraging public transport patronage; and ◆ Provide active street frontages in relation to hotel and residential lobbies, as well as F&B premises along Jones Bay Road. <p><i>Commercial premises, Entertainment facilities, hotels or motel accommodation, and restricted premises are permissible land uses within the B3 Commercial Core zone.</i></p> <p>Refer to Section 6 for a discussion on the permissibility of the proposed land uses.</p>
Clause 4.3 Height of Buildings	<p>Clause 4.3 of SLEP 2012 applies an underlying maximum building height standard of 28m and 65m to the site.</p> <p>Section 75R (3) of the EP&A Act states that <i>environmental planning instruments (other than State environmental planning policies) do not apply to or in respect of an approved project</i>, this clause is not applicable to Part 3A Major Projects Modifications.</p> <p>However, as required by the SEARs, the proposed height of the tower has been considered in detail in Section 9 of the EAR in terms of overshadowing, visual and view impacts, reflectivity, and wind to ensure any adverse environmental impacts are minimised.</p>

Control	Comment/Compliance
Clause 4.4 Floor Space Ratio	The maximum FSR is determined by a permitted FSR of 3.5:1. Section 75R (3) of the EP&A Act states that <i>environmental planning instruments (other than State environmental planning policies) do not apply to or in respect of an approved project</i> , this clause is not applicable to Part 3A Major Project Modifications.
Clause 5.10 Heritage Conservation	The SLEP 2012 Heritage Map identifies the former Pyrmont Power Station Administrative (SELS) building including interiors (I1259) as a locally significant item. A Heritage Impact Statement has been prepared by Urbis (Appendix P) and is considered in Section 9 of this EAR.
Clause 6.21 Design Excellence	<p>Clause 6.21 of SLEP 2012 has a key objective to deliver the highest standard of architectural, urban and landscape design, and applies to the erection of a new building or external alterations to an existing building. An Alternative Design Excellence Process was undertaken to satisfy the requirements of the SEARs. FJMT was selected as the preferred architectural team as a result of the process.</p> <p>A Design Excellence Report has been prepared by Urbis (Appendix F) and is considered in Section 8.</p>
Clause 7.1 – 7.9 – Car parking ancillary to other development	Major Project Approval MP08_0098 approved the maximum car parking provision on site at 3,000 parking spaces. The Proposal will not exceed this maximum.
Clause 7.13 Contribution for purpose of affordable housing	<p>Clause 7.13 of SLEP 2012 requires a monetary contribution for development within Ultimo-Pyrmont, which is to be used for the purpose of affordable housing.</p> <p>The Revised City West Affordable Housing Program published by the NSW Government in June 2010 outlines the requirements for such a contribution, Section 6.10.1 outlines the contributions payable.</p>
Clause 7.15 Flood Planning	The Proposal has addressed potential flood impacts across the site, a Flood Impact Assessment has been included in Appendix DD .
Clause 7.16 Airspace operations	<p>Clause 7.16 of SLEP 2012 states that where development exceeds the Sydney Airport's Limitation or Operation Surface (OLS), the consent authority must consult with the relevant Commonwealth body responsible for development decisions relating to the Sydney (Kingsford-Smith) Airport under Commonwealth legislation about the application.</p> <p>As detailed in Appendix S a formal approval has been received approval from the Department of Infrastructure, Regional Development and Cities (the relevant Commonwealth body) in accordance with Clause 7.16 of SLEP 2012. The approval includes penetration of prescribed airspace inclusive of the OLS.</p>
Clause 7.19 Demolition must not result in long term adverse visual impact	<p>The proposed demolition works are incidental to the proposed works as part of Mod 13, with construction works to be commenced immediately after demolition.</p> <p>Measures will be taken to mitigate any adverse visual impacts that may arise as a result of the demolition with regard to the streetscape, including hoardings. No long term adverse visual impacts are anticipated as a result of the proposed demolition works.</p>
Clause 7.20 Development requiring or authorising preparation of a development control plan	Clause 7.20 identifies types of development requiring the preparation of a development control plan (or alternatively a Stage 1 DA) concerning design and other matters of environmental impact. In this case, section 75R (3) of the EP&A Act states that <i>Environmental planning instruments (other than State environmental planning policies) do not apply to or in respect of an approved project</i> , this clause is not applicable to Part 3A Major Projects Modifications.

6.12.1 Contributions for Purpose of Affordable Housing

Clause 7.13 of the SLEP 2012 requires a monetary contribution for development within Ultimo-Pyrmont, which is to be used for the purpose of affordable housing.

The *Revised City West Affordable Housing Program* published by the NSW Government in June 2010 outlines the requirements for such a contribution. Condition No. B13A of MP08_0098 identifies the Mod 14 requirements. **Table 13** below sets out the contribution to be paid in relation to the Proposal.

Table 13 – Residential Gross Floor Area

Use	Proposed change in GFA as part of Mod 13	Final GFA
Tower Residential Facilities	+308 m2	308 m2
Tower Residential	+23,530 m2	23,530 m2
Total		23,838 m2

For the purposes of calculating the Commercial GFA, this was taken to be the total additional GFA minus the above Residential Floor Space, as per the following:

$$48,977\text{m}^2 \text{ (Total GFA)} - \text{Residential GFA (23,838m}^2\text{)} = \text{Commercial GFA (25,139m}^2\text{)}$$

We propose the condition be updated and modified based on the following calculations.

Table 14 – Affordable Housing Contributions

Contribution Use	Payable Contribution for Mod 13 (\$44.49/m ² for commercial & \$30.97/m ² for Residential) *
Commercial (including Ritz-Carlton Hotel)	\$1,118,434.11
Residential	\$738,262.86
Total	\$1,856,696.97

*Rates effective FY2018/2019

6.12.2 Section 7.11 Contributions

The original approval for The Star in 1994 and the Major Projects Approval MP08_0098 both imposed conditions requiring the payment of Section 7.11 Contributions. Condition B12 of MP08_0098 relates to the payment of the contributions relating to previous modifications.

For the purposes of calculating S7.11 contributions it is important to acknowledge that the gross addition of GFA is offset by the consolidation and subsequent removal of back of house areas and conversion of existing retail. In the absence of a definition specific to the neighbourhood centre uses within the City of Sydney's Contribution Plan 2015 we have adopted the most relevant land use description for the various elements of the neighbourhood centre as discussed below.

For Food and Beverage, an offset should be applied for the consolidation and subsequent removal of back of house areas and conversion of existing retail. Further, an F+B component exists in the new neighbourhood centre having an area of 219sqm, as follows:

Use	Net proposed change in GFA as part of Mod 13
Back of House	-1,202 m2

Use	Net proposed change in GFA as part of Mod 13
F&B Premises	+5,519 m2
Office & Admin	-1,566 m2
Retail	-1,373 m2
F+B (neighbourhood centre)	+219 m2
	Total 1,597 m2

For the neighbourhood centre, the total GFA of 1,691m2, comprises the F+B GFA of 219m2 (included in the above table under F=B) and the remaining GFA broken down into:

Contribution Use	Net proposed change in GFA as part of Mod 13
Function Centre - Assuming L03 (393m2) and L04 (388m2) will be used as function space for the Neighbourhood Centre	+ 781 m ²
Business Premises - Assuming L01 (348m2) and L02 (343m2) will be used as a business centre	+ 691 m ²

As such, we propose the condition be updated to address requirements for the Proposal and modified based on the following calculations.

Table 15 – Section 94 Contributions

Contribution Use	Additional GFA/Hotel Rooms/Apartments	GFA (m ²) per worker/visitor	Contribution Rate	Mod 13 Contribution (\$)
Hotel Rooms	1-2 bed/keys: + 187 rooms	1 or 2 bed/keys: 1.3 visitors/key	\$7,355per visitor	\$2,146,204.50
	3 or 3+ bed/keys: +33 rooms	3 or 3+ bed/keys: 0.8 visitors/key	\$1,864per worker	
		0.4 worker/key		
Apartments	1 bed – 81 apartments		1 bed - \$12,664per unit	\$3,330,720.00
	2 bed – 104 apartments	-	2 bed - \$18,509per unit	
	3 bed – 19 apartments		3 bed - \$20,000 per unit	
F&B	+ 1,597 m ²	21 m ² per worker	\$1,864per worker	\$141,752.76
Function Centre (refer above)	+ 781 m ²	119 m ² per worker	\$1,864per worker	\$12,233.48
Business Premises (refer above)	+ 691 m ²	35 m ² per worker	\$1,864per worker	\$36,800.69
Total				\$5,667,711.43

The above contribution rates are based on the City of Sydney Development Contributions Plan 2015 and the CPI released on March 2018. The next CPI release is Jun 2018 scheduled for 25 July 2018.

It is understood that the final amount of Contributions will be determined by the City of Sydney prior to determination of Mod 13 application.

6.13 SYDNEY DEVELOPMENT CONTROL PLAN 2012

Sydney Development Control Plan 2012 (SDCP 2012) came into effect in December 2012. Given the nature of the proposed works and the operation of section 75R(3) of the EP&A Act, the SDCP 2012 is not applicable to Mod 13. However, consideration has been given to relevant provisions as required by the SEARs, as set out in **Table 16** below.

Table 16 – Sydney DCP 2012

Control	Comment/Compliance
Section 2 – Locality Statement	
2.12 Pyrmont Point	<p>The site is located in the Pyrmont Point locality under SDCP 2015. The locality statement in Section 2.12 of SDCP 2012 identifies that the precinct includes the foreshore area of the peninsular and is bounded by Union Street, Pyrmont Street, John Street, Jones Street, Miller Street and the harbour foreshore.</p> <p>The Architectural Design Statement prepared by FJMT, discusses the design intent and the overall design progression. The proposed tower is an organic response to Pyrmont's character, utilising sandstone to reflect Pyrmont history and environment.</p> <p>Refer to the Urban Context Report provided in Appendix G and Architectural Design Statement provided in Appendix C for further commentary.</p>
Section 3 – General Provisions	
3.1 Public Domain Elements	<ul style="list-style-type: none"> A through site link from Jones Bay Road to the light rail station and Pirrama Road will be maintained and enhanced to encourage pedestrianisation and use of the public transport including the light rail station. The proposed Neighbourhood Centre will improve activation on the corner of Jones Bay Road and Pirrama Road, by increasing casual surveillance and increasing pedestrianisation of the corner. The DCP objectives and provisions recognise the importance of views from public places, including streets, plazas and parks. There are no specific views identified within SDCP 2012 which relate to the site, however the broader principles established by SDCP 2012 relating to improvement of public views and preserving of public views and vistas have been considered within the Visual Impact Assessment at Appendix H and in Section 9. The Visual Impact Assessment at Appendix H has considered the impact of the Proposal on the surrounding residential development and has conclude that the view impacts as a result of the Proposal are reasonable and acceptable. This is addressed in Section 9 of the EAR.
3.2 Defining the Public Domain	<ul style="list-style-type: none"> A Pedestrian Wind Environment Assessment has been prepared by CCP and is provided at Appendix FF. The Assessment examines the impacts of wind on the pedestrian environmental within the site and the public domain. The overall light reflectivity from building materials used on façade will not exceed 20%. A Solar Reflectivity Assessment has been prepared by CPP and is provided at Appendix GG. Proposed external lighting will be operated in accordance with The Star's adopted lighting management plan. All outdoor lighting shall comply with, where relevant, AS/NZ1158.3: 1999 Pedestrian Area (Category P) Lighting and AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting. A Site-Wide Lighting Management Plan has been prepared by WSP and is provided at Appendix T. The Site-Wide Lighting Management Plan provides guidelines and design parameters for the proposed external lighting upgrades to be designed in accordance with Australian Standards and to be integrated with the architecture and existing buildings property wide. The proposed external lighting will minimise obtrusive light effects and spill light beyond the property line while considering the lit image and identity of the property holistically after dark. Details demonstrating compliance with these requirements are to be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant construction certificate as required by Condition B18 Outdoor Lighting.

Control	Comment/Compliance
	<ul style="list-style-type: none"> ◆ The Proposal includes upgrades to paving finishes along Jones Bay Road, Pirrama Road and Pyrmont Street. ◆ Five existing palms are to be retained in the central Pirrama Road frontage, with a more dense tree to be provided on either side.
3.3 Design Excellence and Competitive Design Processes	An Alternative Design Excellence Process was undertaken to satisfy the design excellence requirements outlined in the SEARs. A Design Excellence Report (see Appendix F) outlines the process for the selection of an architectural design for the Proposal.
3.5 Urban Ecology	<ul style="list-style-type: none"> ◆ The site does not contain existing habitats. ◆ The site is located within Pyrmont, and therefore the Urban Vegetation provisions do not apply. ◆ The Proposal includes the removal of trees; an Arboricultural Assessment Report has been prepared by Earthscape and is included at Appendix R. Replacement planting will be provided along Pirrama Road to offset the proposed tree removal. Plant species have been carefully chosen to form a rich pallet of size, form, colour and texture. <i>Angophora Costata</i> (Smooth Barked Apple) have been chosen to replace the removed street trees, as per the City of Sydney's Street Tree Master Plan 2011 and in consultation with the City of Sydney's Landscape Team.
3.6 Ecologically Sustainable Development	<p>The tower and podium have been designed to achieve a 5-star green rating. A Sustainability Report has been prepared by WSP and is provided at Appendix Z.</p> <p>A feature of Ritz Carlton Residential Tower is the provision of a 165kWp photovoltaic system on the building. The photovoltaic system will be installed across suitable roof top areas across the site and connect electrically to Ritz Carlton Residential Tower, providing zero carbon electricity.</p>
3.9 Heritage	<ul style="list-style-type: none"> ◆ The site is not located within a heritage conservation area, however, contains a locally significant heritage item, known as the SELS Building. ◆ A Heritage Impact Statement has been prepared by Urbis, refer to Appendix P. ◆ A Conservation Management Plan (SELS building) has been prepared by Urbis, refer to Appendix Q. ◆ An Aboriginal and Historical Archaeological Assessment has been prepared by Urbis, refer to Appendix O. <p>Refer to Section 9 for a detailed assessment of the likely heritage and archaeological impacts of the Proposal.</p>
3.11 Transport and Parking	<ul style="list-style-type: none"> ◆ A Traffic Impact Statement has been prepared by Mott MacDonald, refer to Appendix J. The assessment addresses the potential impacts of the Proposal on surrounding movement systems. ◆ The Proposal promotes walking, cycling and the use of public transport, however, provides appropriate facilities to manage expected vehicle and bicycle demand. ◆ The Star is permitted to have a maximum of 3,000 car parking spaces across the whole site (per MP08_0098), the Proposal will not exceed this maximum requirement. ◆ As part of the Proposal, 35 bike spaces and 62 visitor bike spaces will be provided to encourage active transport and accommodate the proposed development. ◆ The Proposal includes the provision of a new car stacker system to service the uses within the new tower. The system will not be used for parking for car share schemes.
3.12 Social and Environmental Responsibilities	<ul style="list-style-type: none"> ◆ A Crime Prevention Through Environmental Design (CPTED) Assessment has been undertaken for the Proposal and is included within Appendix N. ◆ The development is not located near the Cross-City Tunnel, therefore poor air quality as a result of the ventilation stacks is not an issue. ◆ A Social Impact Assessment has been undertaken for the Proposal and is included within Appendix M.
3.14 Waste	A Waste Management Plan has been prepared by WSP, refer to Appendix II .

Control	Comment/Compliance
	<p>This report addresses the collection methods and minimisation of waste during occupation. Ritz-Carlton and the residential apartments will have separate waste rooms, to minimise conflict issues.</p> <p>The report also addresses construction and demolition waste in accordance with the relevant standards.</p>
3.15 Late Night Trading Management	<p>The site currently operates 24 hours a day, seven days a week; and is considered a Category A – High Impact Premises.</p> <p>The Star has an effective Operational Management Plan established to outline procedures to minimise harm and impact. This Operational Management Plan will be updated to include Mod 13 works, and will be provided to DP&E prior to issue of the relevant Occupation Certificate.</p>
3.16 Signs and Advertisements	<p>The Proposal includes signage works as described in Section 4 of the EAR.</p> <p>Mod 13 proposes several signs to improve wayfinding and provide building identification and business identification signage on the site.</p> <p>A Ritz-Carlton Business Identification sign at the podium and two Star Logo signs at the top of the tower are proposed.</p> <p>Signage has been addressed in detail in Section 9 of the EAR and the Architectural Design Statement at Appendix C.</p>
3.17 Contamination	<p>The site has been remediated. A Phase 1 contamination and Assessment and a Contamination Revocation Notice were provided for the site with MP08_0098. As discussed in Section 9, there is low likelihood of significant contamination being present on the site.</p>
Section 4 – Development Types	
4.2 Residential Flat, Commercial and Mixed-Use Development	<p>The Proposal includes the provision for residential apartments; in addition to the Sydney DCP 2012 the Proposal has had regard to SEPP 65 and the Apartment Design Guide. Appendix C provides an assessment against SEPP 65 and the Apartment Design Guide.</p> <ul style="list-style-type: none"> ◆ The Height of Building Map adopted under SLEP 2012 sets a maximum building height of 65 metres. The Proposal exceeds the maximum building height, however has regard to the objectives of clause 4.3. ◆ The site does not have an identified street frontage height. ◆ The proposed floor to ceiling heights and floor to floor height complies with the BCA requirements. ◆ The proposed tower is setback appropriately from neighbouring buildings on-site and adjacent. ◆ The residential apartments will have a high degree of amenity providing high quality landscaping, private and common open space, sun access, ventilation and acoustic privacy. ◆ The Proposal offers a diverse mix of dwelling types; include one-bedroom, two-bedroom and three-bedroom apartments. ◆ Residential uses on the ground and first floor are not proposed.
4.4 Other Development Types and Uses	<p>The Proposal includes the provision for visitor accommodation; Ritz-Carlton will be the operator of the hotel component of the tower.</p> <ul style="list-style-type: none"> ◆ The proposed design is self-contained and has no common access ways with adjoining properties and the hotel lobby will be operational 24 hours a day, seven days a week to ensure guests have access to the premises. ◆ Hotel rooms will be of high quality as the Proposal is for a six-star hotel that offers a high level of amenity to guest. ◆ The proposed development includes 220 hotel keys. ◆ Guests will not be permitted to stay for longer than three months in a continuous period. ◆ Each hotel key will include individual, secure, lockable storage facilities within the rooms.

7 STRATEGIC CONTEXT

The following strategic planning policies and design guidelines are also identified in the SEARs and addressed in this section. Where the document has been superseded by a subsequent draft policy the latter is addressed.

- ◆ NSW State Priorities;
- ◆ A Metropolis of Three Cities - Greater Sydney Region Plan;
- ◆ Eastern City District Plan;
- ◆ Future Transport Strategy 2056;
- ◆ Sydney City Centre Access Strategy 2013;
- ◆ Sydney's Cycling Future 2013;
- ◆ Sydney's Walking Future 2013;
- ◆ Sydney's Light Rail Future 2013;
- ◆ Draft Central Sydney Planning Strategy;
- ◆ Visitor Accommodation Action Plan; and
- ◆ Tourism 2020.

7.1 NSW STATE PRIORITIES

NSW Government's State Priorities, in conjunction with the NSW Budget, guide policy and budget decisions for delivering community priorities. There are 18 State Priorities, including a focus on housing and transport infrastructure, as well as a strong economy.

The Proposal will be consistent with the State Priorities because:

- ◆ The site is already well served by public transport, including buses and ferries;
- ◆ The Proposal will improve the legibility and access into the light rail station at Level B2, and improve pedestrian and bicycle access into the site; and
- ◆ The Proposal will contribute to the growth of the NSW economy and enhance its international appeal.

7.2 A METROPOLIS OF THREE CITIES - GREATER SYDNEY REGION PLAN

A Metropolis of Three Cities - Greater Sydney Region Plan (the Region Plan) released March 2018 by the NSW Government provides guidance for land use planning and is built on a vision where most residents will live within 30 minutes of their jobs, education and health facilities, and services. The vision seeks to meet the needs of a growing population by transforming Greater Sydney into a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City. The Region Plan provides a framework to strengthen Sydney's global competitiveness and delivery of investment, infrastructure and job growth.

The site is located within the Eastern Harbour City, within the Harbour CBD and the Eastern Economic Corridor as shown in **Figure 50. Table 17**, overleaf identifies how the Proposal supports the realisation of the relevant Directions and Objectives:

Table 17 – The Greater Sydney Region Plan

Direction	Objective(s)	Commentary
A collaborative city – working together to grow Greater Sydney	Objective 5: Benefits of growth realised by collaboration of governments, community and business.	<ul style="list-style-type: none"> Provide employment and housing within close proximity to the Harbour CBD and easily walkable and accessible by public transport
A city of people – celebrating diversity and putting people at the heart of planning	<p>Objective 6: Services and infrastructure meet communities' changing needs.</p> <p>Objective 8: Greater Sydney's communities are culturally rich with diverse neighbourhoods.</p>	<ul style="list-style-type: none"> The neighbourhood centre will create a Hub in the heart of Pyrmont and provide services to the community. The centre will provide a place for the community to interact and collaborate through the provision of much needed community services.
Housing the city – giving people housing choices	Objective 10: Greater housing supply.	<ul style="list-style-type: none"> The proposed housing contributes to the housing supply targets identified in the Eastern City District Plan.
A city of great places – designing places for people	<p>Objective 12: Great places that bring people together.</p> <p>Objective 13: Environmental heritage is identified, conserved and enhanced.</p>	<ul style="list-style-type: none"> Public realm upgrades and landscaping and improvements will assist in the renewal of the site in its greater context. Conservation of a locally significant heritage item; the SELS Building. As discussed in Section 9.21, no adverse impact on heritage items in the locality is proposed.
Jobs and skills for the city – creating the conditions for a stronger economy	<p>Objective 18: Harbour CBD is stronger and more competitive.</p> <p>Objective 24: Economic sectors targeted for success.</p>	<ul style="list-style-type: none"> Provide an additional 747 jobs every year (average from FY2017 to FY2030). Contribute to making the Harbour CBD more economically competitive and stronger, by contributing an additional \$793 million to the NSW economy from FY2017 to FY2030.
An efficient city – Using resources wisely	<p>Objective 33: A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change</p> <p>Objective 34: Energy and water flows are captured, used and re-used</p>	<ul style="list-style-type: none"> As detailed in Appendix Z, the Proposal incorporates several ESD initiatives. The ESD report concludes that the development will be achieving sustainability best practice outcomes across Modification 13 and has been benchmarked against the industry recognised sustainability tools to demonstrate that best practice holistic sustainability outcomes can be achieved.

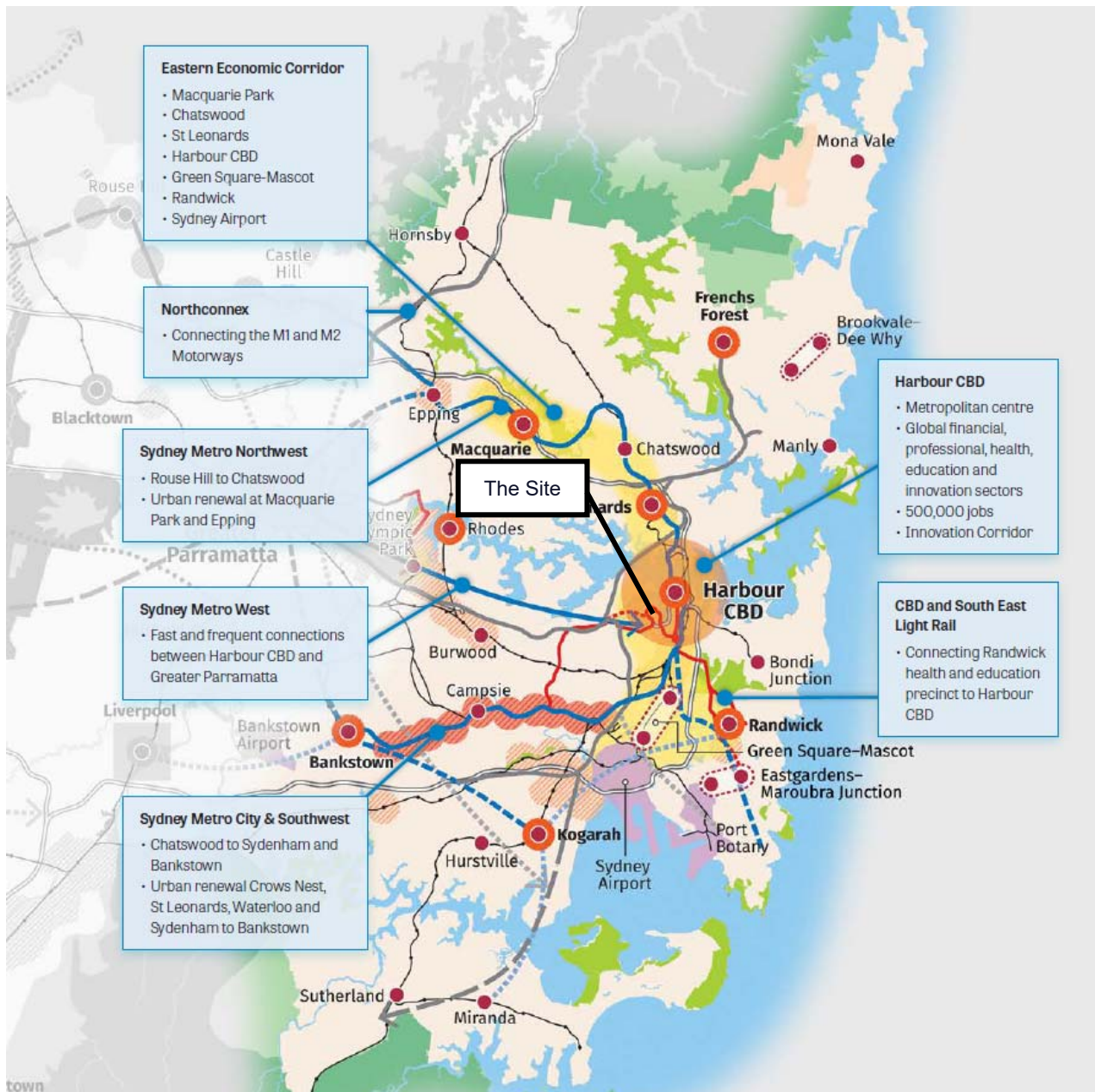


Figure 50 – Greater Sydney Region Plan: The Harbour CBD

7.3 EASTERN CITY DISTRICT PLAN

The Eastern City District Plan released in March 2018, provides the basis for strategic planning in the District, having regard to economic, social and environmental matters. It establishes planning priorities that are consistent with the objectives, strategies and actions of the Region Plan, and identifies actions required to achieve the planning priorities.

The Eastern City District vision is to *become more innovative and globally competitive, carving out a greater portion of knowledge-intensive jobs from the Asia Pacific Region. The vision will improve the District's lifestyle and environmental assets.*

Figure 51 identifies the site in the context of the Eastern City District, within the Harbour CBD.

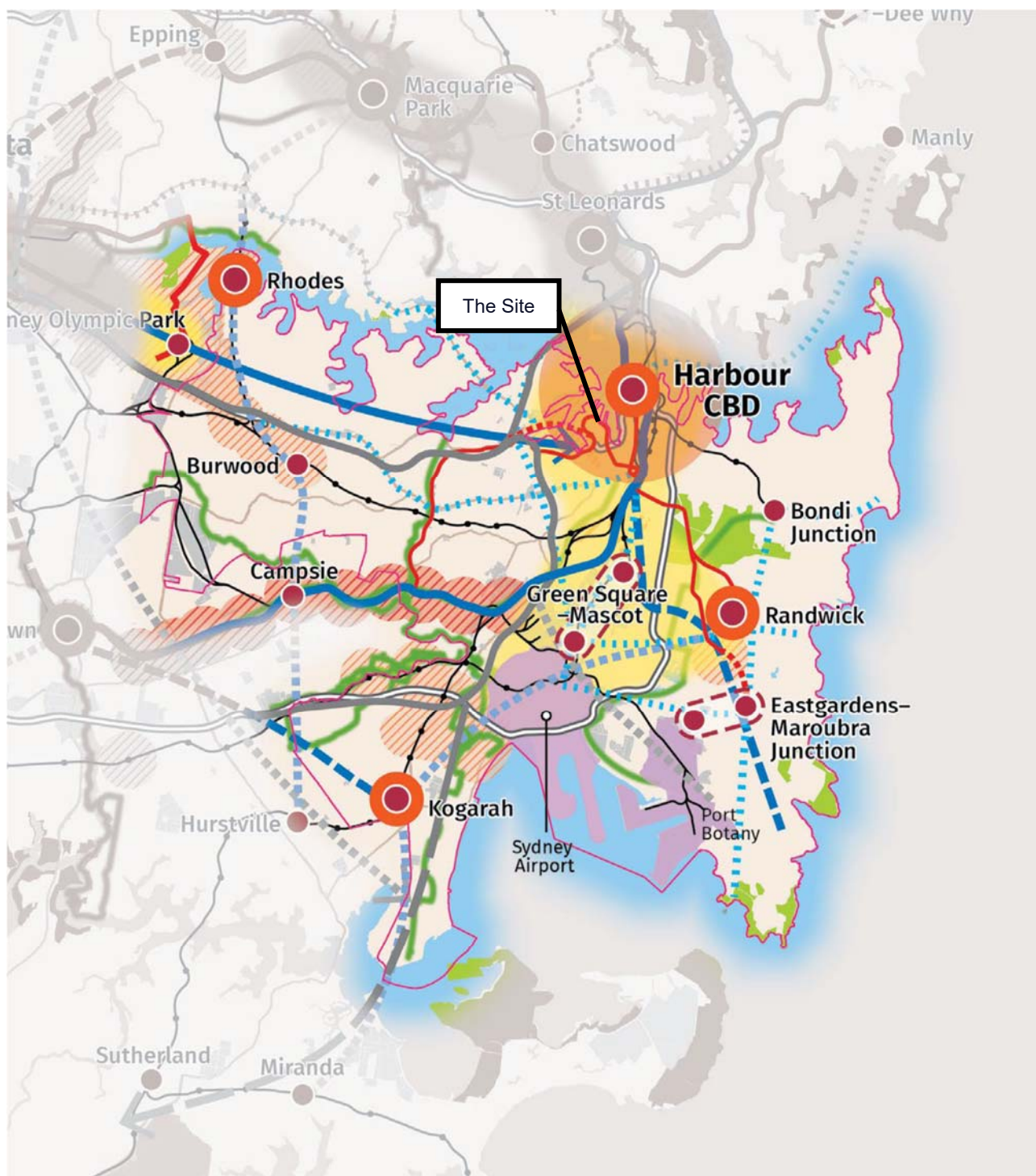


Figure 51 – The Eastern City District Plan

The key priorities and actions of the Eastern City District Plan relevant to the site and the Proposal include:

- ◆ Improving 30-minute access to jobs and services – enhancing access to a broader range of jobs and services within 30 minutes, with new housing to be focussed on transport corridors and around employment centres to increase the proportion of people living within easy access of jobs and services.
- ◆ Identifying opportunities and creating the capacity to deliver 20-year strategic housing supply targets – to be achieved through urban renewal, medium density infill development and new communities in land release areas.
- ◆ Provide an additional 662,000 (baseline) to 732,000 (high estimate) jobs in the Eastern City by 2036, facilitated

through providing job in well-connected places.

- ◆ Improve housing diversity and affordability.
- ◆ Creating great places – through design-led planning and supporting high quality urban design.
- ◆ Conserving and enhancing environmental heritage including Aboriginal, European and natural.
- ◆ Facilitating enhanced walking and cycling connections.
- ◆ Fostering the creative arts and culture.
- ◆ Supporting planning for shared spaces.
- ◆ Responding to people's need for services.
- ◆ Protecting the District's waterways – protecting and managing access to the Sydney Harbour foreshore as a place for cultural events and celebrations, tourism, recreation around its foreshores, ferries and recreational watercraft.

Table 18 identifies how the Proposal supports the realisations of the relevant Priorities and Actions of the Eastern City District Plan:

Table 18 – The Eastern City District Plan

Direction	Planning Priority	Action	Commentary
A city of people – celebrating diversity and putting people at the heart of planning	E3 Providing services and social infrastructure to meet peoples changing needs.	Deliver social infrastructure that reflects the needs of the community now and in the future (8).	◆ The neighbourhood centre will create a Hub in the heart of Pyrmont and provide services to the community. The centre will provide a place for the community to interact and collaborate through the provision of much needed community services.
	E4 Fostering healthy, creative, culturally rich and socially connected communities	Deliver healthy, safe and inclusive places for people of all ages and abilities that support active, resilient and socially connected communities (10).	
Housing the city – giving people housing choices	E5 Providing housing supply, choice and affordability with access to jobs, services and public transport	Prepare local or district housing strategies (16).	<ul style="list-style-type: none"> ◆ The proposed housing contributes to the housing supply targets identified in the Eastern City District Plan. The targets seek an additional 18,300 dwellings in Sydney LGA by 2020-21 and 46,550 in the Eastern City in total. The longer-term housing target for the Eastern City District is to provide an additional 157,500 dwellings in 20 years. ◆ The Proposal will assist in improving housing diversity and affordability through increasing residential density in a well services and connected part of the Harbour CBD.
A city of great places – designing places for people	E6 Creating and renewing great places and local centres, and respecting the Districts heritage.	<p>Using a place-based and collaborative approach throughout planning, design, development and management, deliver great places (18).</p> <p>Identify, conserve and enhance environmental heritage (20).</p>	<ul style="list-style-type: none"> ◆ Public realm upgrades and landscaping and improvements will assist in the renewal of the site in its greater context. ◆ Conservation of a locally significant heritage item; the SELS Building. As discussed in Section 9.21, no adverse impact on heritage items in the locality is proposed.

Jobs and skills for the city – creating the conditions for a stronger economy	<p>E7 Growing a stronger and more competitive Harbour CBD</p> <p>E11 Growing investment, business opportunities and jobs in strategic centres</p> <p>E13 Supporting growth of targeted industry sectors</p>	<p>Strengthen the international competitiveness of the Harbour CBD and grow its vibrancy by:</p> <ul style="list-style-type: none"> ◆ further growing an internationally competitive commercial sector to support an innovation economy ◆ providing residential development without compromising commercial development ◆ providing a wide range of cultural, entertainment, arts and leisure activities ◆ providing a diverse and vibrant night-time economy, in a way that responds to potential negative impacts (24). <p>Plan for urban development, new centres, better places and employment uses that are integrated with, and optimise opportunities of, the public value and use of Sydney Metro City & South West, CBD and South East Light Rail, and WestConnex as well as other city shaping projects (36).</p> <p>Consider opportunities to enhance the tourist and visitor economy in the Direct including a coordinated approach to tourism activities, events and accommodation (57).</p>	<p>The Proposal:</p> <ul style="list-style-type: none"> ◆ provides an additional 747 jobs every year (average from FY2017 to FY2030). ◆ contributes to making the Harbour CBD more economically competitive and stronger, by contributing an additional \$793 million to the NSW economy from FY2017 to FY2030. ◆ provides job opportunities close to Sydney City and is easily accessible via public transport. ◆ provides visitor and residential accommodation options in a well-connected and central location. ◆ a 6-star hotel in Sydney, contributing to the range of hotels across different price points. The Ritz-Carlton brand will contribute to Sydney's tourism infrastructure.
An efficient city – Using resources wisely	<p>E19 Reducing carbon emissions and managing energy, water and waste efficiently</p>	<p>Support initiatives that contribute to the aspirational objective of achieving net-zero emissions by 2050 (68).</p>	<ul style="list-style-type: none"> ◆ As detailed in Appendix Z, the Proposal incorporates several ESD initiatives. The ESD report concludes that the development will be achieving sustainability best practice outcomes across Modification 13 and has been benchmarked against the industry recognised sustainability tools to demonstrate that best practice holistic sustainability outcomes can be achieved.

7.4 FUTURE TRANSPORT STRATEGY 2056

The Future Transport Strategy 2056 (the Strategy) sets the 40-year vision, directions and outcomes for customer mobility in NSW and will guide infrastructure investment.

The vision of the Strategy is built on six outcomes:

- ◆ Customer Focused.
- ◆ Successful Places.
- ◆ A Strong Economy.
- ◆ Safety and Performance.
- ◆ Accessible Services.
- ◆ Sustainable.

The Strategy outlines committed initiatives and initiatives for investigation. Committed initiatives for the next decade include capacity and journey time improvements to radial transport corridors serving the Harbour CBD and surrounding centres, with Sydney Metro Northwest, Sydney Metro City and Southwest, Northern Beaches B-Line, and CBD and South East Light Rail being some of the key projects. New transport links to support growth and improve journey times, such as Western Harbour Tunnel and Northern Beaches Link (subject to Final Business Case), Sydney Metro West and the proposed F6 - WestConnex to President Avenue, Kogarah (subject to Final Business Case) are also being investigated.

Sydney Metro West (subject to Final Business Case) will provide mass transit between Sydney CBD, Bays Precinct and Parramatta. The Interim Rail Link and Metro Corridor Land Application Map included in the Infrastructure SEPP for Metro West shows the route passing under the southern end of The Star site and a new metro station located immediately west of The Star site under the Union Street and Harris Street intersection.

The strategic opportunity to provide a new metro station so close to The Star, in terms of realising the development potential of the site, is significant. Mod 13 does not modify the basement area under The Darling Hotel and provision has been made within The Star to accommodate a future Metro line.

The Strategy also identifies a future light rail link from The Star to the Bays Precinct (**Figure 52** - Greater Sydney initiatives for investigation 10–20 years).

The Star is a highly accessible site, strategically located within walking distance of the CBD as well as being located directly above a light rail station and within close proximity to a future Metro Station.

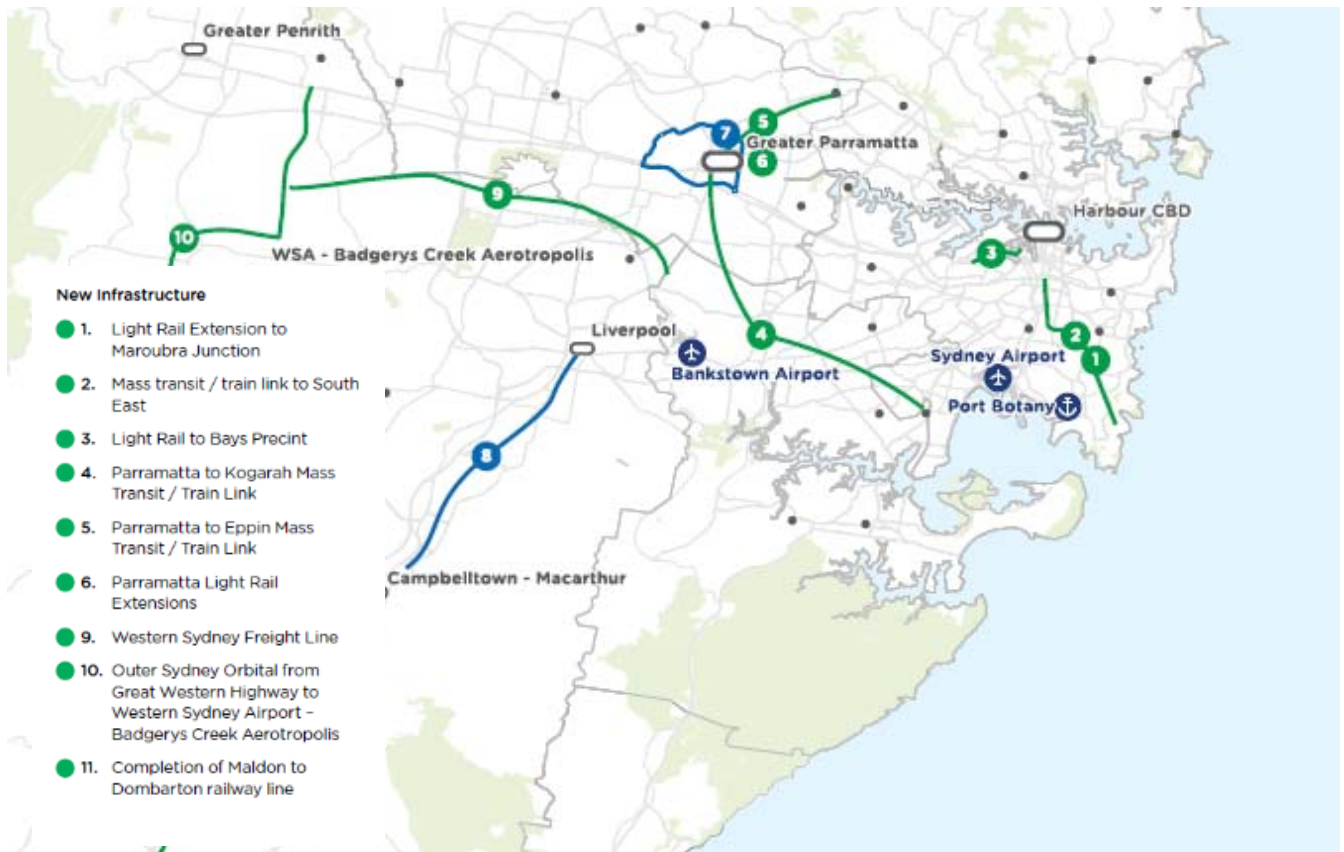


Figure 52 - Greater Sydney Initiatives for Investigation (10 – 20 years)

7.5 SYDNEY CITY CENTRE ACCESS STRATEGY

The strategy aims to deliver a fully integrated transport network in Sydney City Centre. The Access Strategy prioritises and allocates street space for public transport, general traffic, pedestrians, cyclists, taxis and service vehicles, helping to unlock Sydney's transport capacity.

The Proposal will be consistent with the Sydney Centre Access Strategy because it will:

- ◆ Enhance active transport by providing additional bicycle parking facilities for staff and visitors to the site;
- ◆ Improve the pedestrian way-finding at the ground plane around and through the site (especially at the Level B2 Light Rail Station);
- ◆ Improve through-site connectivity by upgrading the existing arcade entrance at the Jones Bay Road frontage; and
- ◆ Provide ground plane activation along Pirrama Road and Jones Bay Road, ensuring a pleasant and safe pedestrian environment for visitors and passers-by.

7.6 SYDNEY'S CYCLING FUTURE 2013

The *Sydney's Cycling Future 2013* (SCF 2013) was released by NSW Government in December 2013 to facilitate improved bicycle networks as an integrated component when planning for new transport and infrastructure projects. As stated above the cycle network surrounding the site has a good connectivity to bike routes.

SEGL encourages cycling with the provision of bicycle parking and end-of-trip facilities for staff to change and shower after cycling to work.

The Proposal will be consistent with SCF 2013 because it will enhance the cycle parking provisions on the site to accommodate additional employee and visitor trips generated. The proposed improvements include the provision of 35 Class 1 bicycle parking spaces, and 62 visitor spaces at various location on the site as described in **Section 4**.

7.7 SYDNEY'S WALKING FUTURE 2013

Sydney's Walking Future 2013 (SWF 2013) was released by NSW Government in December 2013 and seeks to create a culture of walking for transport by promoting walking as a viable and attractive transport choice. The Strategy aims to link walking to urban growth and to prioritise the needs of pedestrians in the planning, design and construction of new transport and urban development projects.

SEGL encourages a 'Walking Future' with the provision of end-of-trip facilities for staff onsite.

A draft Green Travel Plan has been prepared and is provided at **Appendix WW**. This will be updated and submitted to the DP&E and Council prior to the commencement of construction of the relevant stage of development and will be implemented prior to occupation of the relevant stage.

7.8 SYDNEY'S LIGHT RAIL FUTURE 2013

Sydney's Light Rail Future 2013 is focused on expanding light rail services for the CBD and inner Sydney. The site is directly serviced by the light rail with a stop onsite.

The Proposal will encourage use of the light rail system through upgrades to the finishes of the station, provision of commuter bike parking and a hire bike system, as well as opening up sight lines from Pirrama Road and the waterfront through the site to the light rail station.

These works will make the light rail more accessible to the public.

7.9 SUSTAINABLE SYDNEY 2030

The Proposal is consistent with the broad Sustainable Sydney 2030 vision because the Proposal is:

- ◆ **Green:** The Proposal will incorporate several ESD strategies, with the tower component targeting a 5-star green star rating. The proposed development will also enhance walking, active transport, and public transport patronage.
- ◆ **Global:** The Proposal will enhance the visitor accommodation and tourism offering that Sydney has to offer, and make a significant contribution to the NSW and Sydney economy in the form of investment and employment.
- ◆ **Connected:** The Proposal will enhance pedestrian connectivity into the site and improve the ground plane of the development through street-level activation.

7.10 DRAFT CENTRAL SYDNEY PLANNING STRATEGY

The draft Central Sydney Planning Strategy (draft Strategy) is a 20-year growth strategy that revises previous planning controls in order to deliver on the City of Sydney's Sustainable Sydney 2030 program for a green, global and connected city.

The site is located outside Central Sydney as defined in the draft Strategy, but overlooks it and is located immediately to its west.

The draft Strategy identifies building heights up to 235m, and identifies the following objectives in relation to height:

- ◆ To protect and improve sunlight to important public parks and places throughout the year, during periods in the day when they are most used.
- ◆ To maintain adequate clearance for air navigational activity over and around Central Sydney.
- ◆ To ensure tall buildings do not obstruct important public views.

A discussion on the impacts of the Proposal on sunlight access to public parks, air navigational activity and public views is provided in **Section 9** of the EAR.

The draft Strategy also identifies key public views within Central Sydney, to and through parks and other well-used public spaces, that define Sydney.

The draft Strategy aims to identify and preserve these significant views from public places, including the view of the western sky looking from Martin Place. This view has been addressed in detail by FJMT in their Architectural Design Statement at **Appendix C**, Architectus in their Visual Impact Assessment at **Appendix H**, and has been summarised in **Section 9** of the EAR.

The Strategy also seeks to move towards a more sustainable city with planning controls that require best practice energy and water standards and for growth sites to drive zero-net energy outcomes. As demonstrated within the Sustainability Report provided at **Appendix Z**, the Proposal will contribute to this objective through various sustainability initiatives.

7.11 VISITOR ACCOMMODATION ACTION PLAN

The Visitor Accommodation Action Plan notes that the health of Sydney's visitor economy is important to the NSW and the Australian tourism industry. The Action Plan states that the City of Sydney should provide a positive environment for investment by removing barriers and having a positive policy approach to accommodation development rather than through incentives or supply targets.

As noted in PWC's Economic Impact Assessment at **Appendix L**, the Australian Government is striving for an ambitious growth target to double overnight domestic and international visitor expenditure by 2020 (Tourism 2020). To facilitate this growth, the existing development pipeline needs to meet a target of 6,000 to 20,000 new rooms by 2020. PWC states that The Star is a fundamental driver of economic growth through tourism in Sydney, with benefits flowing through to the rest of NSW, and concludes that with the targets for tourism and the focus on high-end accommodation, the contribution of The Star (including Mod 13) is crucial in contributing to these targets.

The Proposal will provide a significant addition to Sydney's visitor economy by providing a 220 room Ritz-Carlton Hotel with a niche target market as a '6 star' hotel, which is new to the NSW visitor accommodation sector. PWC notes that this investment will bring a significant new demand into the market, with the overall impact being growth in the accommodation and food services industry, and associated industries.

7.12 TOURISM 2020

Tourism 2020 is a whole-of-government and industry long-term strategy to build the resilience and competitiveness of Australia's tourism industry and grow its economic contribution. It focuses on improving the industry's performance and competitiveness by pursuing new opportunities for growth and addressing supply-side factors.

The Tourism 2020 goal is to achieve more than \$115 billion in overnight spend by 2020 (up from \$70 billion in 2009).

To facilitate this growth, the existing development pipeline needs to meet a target of 6,000 to 20,000 new rooms by 2020 with a suggested push towards the development of new five or six-star hotels to promote Australia as a premium brand.

As the State with the highest number of international visitors annually (3.8 million visitors- September 2017), NSW will be the destination for much of this growth. The Star is a fundamental driver of economic growth through tourism in Sydney with benefits flowing through to the rest of NSW. In 2017, it received 13.6 million local, domestic and international guests.

Within Sydney City, the hotel market recorded occupancy levels over 87 per cent for YTD August 2016 and within The Star itself, the three high-end hotels are currently operating at more than 90% occupancy. The Star is unique within the city and presents an unparalleled opportunity to create a premium accommodation offer.

The 220 room Ritz-Carlton Hotel will address the Tourism 2020 objectives by providing high quality hotel accommodation is a location within walking distance to Darling Harbour and associated development. SEGL's partnership with the Ritz-Carlton will bring with it standards of service that create benchmarks in the hotel and hospitality industry and are fitting for The Star.

8 DESIGN EXCELLENCE

Part 2 of the SEARs requires that the Proposal demonstrate design excellence. The SEARs allow for an Alternative Design Excellence process to be undertaken that has been endorsed in writing by the Secretary and includes:

- ◆ A design brief requiring a minimum of three alternative design options for the Proposal;
- ◆ Establishment of a design review panel to review each alternative and inform the preferred design; and
- ◆ Mechanisms to retain the architect during the design and construction of the scheme.

As summarised below and described in detail within the Design Excellence Report at **Appendix F**, SEGL elected to undergo an Alternative Design Excellence process for Mod 13, which was approved by the Secretary.

Three alternative design options were considered by a DRP, with the winning architect, FJMT, being retained for the design and construction of the proposed development.

The design excellence principles that guided the process were to:

- ◆ Achieve the highest standard of built form outcomes for the site;
- ◆ Encourage innovation and best practice approaches to built-form design;
- ◆ Encourage high quality built form that contributes positively to the overall architectural quality of the city;
- ◆ Provide buildings appropriate to their context; and
- ◆ Achieve environmentally sustainable built form outcomes.

Below is a summary of the key aspects of the alternative design excellence process that was undertaken.

8.1 ALTERNATIVE DESIGN EXCELLENCE PROCESS

As described in detail within the Design Excellence Report at **Appendix F**, the Alternative Design Excellence process comprised the following steps:

- ◆ Establish a design excellence brief;
- ◆ Appoint a DRP;
- ◆ Convene a competitive design process;
- ◆ Conduct a design review forum that includes third party stakeholders;
- ◆ Selection of preferred project;
- ◆ Refinement of preferred design; and
- ◆ Endorsement of final design.

The Alternative Design Excellence process was endorsed by the Deputy Secretary of Department in a letter dated 20 October 2016, which is provided for reference as an attachment to the Design Excellence Report at **Appendix F**.

8.2 DESIGN EXCELLENCE BRIEF

A Design Excellence Brief was prepared by Urbis to inform the DRP and the design teams, comprising details on site background, context, relevant planning policies and guidelines, indicative development massing, commercial brief, indicative façade typologies, and key themes for exploration.

8.3 DESIGN REVIEW PANEL

The DRP appointed by SEGL to assess the competing schemes comprised the following individuals:

- ◆ **Greg Hawkins** – Managing Director, The Star.
- ◆ **James Doolan** – Regional Vice President Hotel Development - Asia Pacific, Marriott International.

- ◆ **Lisa-Maree Carrigan** – Director Group GSA.
- ◆ **Craig Allchin** – Adjunct Professor, UTS and Director, Six Degrees Urban Pty Ltd.
- ◆ **Peter Poulet** – NSW Government Architect and Executive Director, Office of State Architect.

Several technical advisors were also engaged to provide input into the design competition process including Urbis, DWP, The Jerde Partnership, WSP, Umow Lai, Mott MacDonald, Architectus, CPP, TTW, and Rider Levett Bucknall.

The following assessment criteria were established to frame the DRP's evaluation of the alternative design schemes:

- ◆ **Criterion 1** – Commercial and functional requirements to ensure the design is fit for purpose.
- ◆ **Criterion 2** – Architectural and Urban Design Merit.
- ◆ **Criterion 3** – Buildability.

The matters for consideration within each of these criteria are explained in greater detail within the Design Excellence Report.

8.4 SUMMARY OF THE PROCESS AND OUTCOMES

The following four architectural firms were invited to participate in the design excellence process:

- ◆ BVN Architecture.
- ◆ Francis-Jones Morehen Thorp (FJMT).
- ◆ Grimshaw Architects.
- ◆ Woods Bagot.

Three of the competitors completed the design excellence process, with Woods Bagot withdrawing from the process prior to presentations to the DRP, due to external considerations.

8.4.1 Phase 1

The initial design submissions (Phase 1) were evaluated by the DRP, who formed the view that they were not in a position to recommend a preferred scheme because all three schemes were required to further resolve the tower design and provide additional supporting information to aid the DRP's assessment.

8.4.2 Phase 2

All three architectural teams were invited to participate in "Phase 2" of the Design Excellence Competition and were given an additional four weeks to refine their designs. Urbis and the broader consultant team reviewed the submissions and provided comments to the DRP to assist in their assessment.

All three architects presented refined schemes as part of Phase 2. The DRP noted that all submissions were of a very high quality and capable of satisfying the project brief. Having regard to the competition assessment criteria, the DRP unanimously nominated the FJMT scheme as the preferred design.

8.4.3 The Winning Scheme - FJMT

After FJMT was announced as the successful architect, they were given three months to develop their scheme in conjunction with the project team, SEGL, Far East Consortium, and Ritz-Carlton.

8.4.4 Final Design Presentation to DRP

FJMT presented their final design to the DRP on 16 March 2017. The DRP commended FJMT on the extent of design development that had progressed, and concluded that the final design delivered a refined scheme that reflected and positively built on the design intent of the FJMT Phase 2 competition scheme.

The DRP also praised the 'ribbon component' of the design, stating that the design delivered an effective integration of activities and built form elements/language across the site.

The proposed Neighbourhood Centre component of the development was recognised by the DRP as offering significant benefits for the local community and representing a key feature of the design.

In preparing for formal lodgement, the DRP advised the proponent team to consider the following:

- ◆ **Urban context** – a clear demonstration of how the project relates to the planning for other nearby areas to the West of the traditional CBD, including for example Darling Harbour and the Bays Precinct (Fish market Site and White Bay etc.). The changing character of both the Sydney CBD and areas to the West was acknowledged.
- ◆ **Neighbourhood facility** – establishing clarity and a firm commitment from SEGL about the intended range of activities and operating model for this important component of the site. This will ensure the intended community benefit will be achieved in the medium to long term.
- ◆ **Site linkages/legibility** – establishing clear pedestrian movement opportunities and visual linkages through the site from Jones Bay Road, noting the inherent constraints of the site with different levels.

These matters have been considered in detail in finalising the Proposal for Mod 13 and have been addressed within this EAR in **Section 9**.

8.5 COMMUNITY INPUT INTO THE DESIGN EXCELLENCE PROCESS

As part of Phase 1 of the Design Excellence Process community feedback was sought by SEGL. Three separate sessions were held for community groups, stakeholders and peak bodies; and the local community. Feedback was gathered by observation, discussion notes and an online survey.

Day 2 of the design excellence process was led by KJA, and comprised of the following sessions:

- ◆ **Session 1:** Breakfast Session with Industry Groups and Government Agencies. All architects presented and answered questions. The Design Review Panel members were invited to observe.
- ◆ **Session 2:** Day time session with community groups. All architects presented and answered questions. The Design Review Panel members were invited to observe.
- ◆ **Session 3:** Community open house session. Individual display by each of the competing architects were displayed.

A broad range of topics, issues and comments were covered during the briefings and community information sessions, and in the online survey. Key topics included:

- ◆ Traffic, transport and parking.
- ◆ Height and scale of tower (including overshadowing).
- ◆ Noise and acoustics.
- ◆ Integration with Pyrmont/Darling Harbour (preservation of the heritage and character of the local area).
- ◆ View impacts.
- ◆ Social issues (i.e. antisocial behaviour).
- ◆ Construction issues.
- ◆ Contribution to the community.

These key issues have been considered by the project team and FJMT in further refining their development. These responses to the community feedback have been summarised within the Community Consultation Report at **Appendix I**.

8.6 RETAINING FJMT DURING DESIGN AND CONSTRUCTION

The SEARs require the proponent to demonstrate ‘mechanisms to retain the architect during the design and construction of the scheme.’”

Following the DRP’s endorsement of the refined scheme in March 2017, FJMT has been retained for the detailed design development of the tower and Ribbon element of the Proposal in preparation for lodgement of the Mod 13. DWP have worked with FJMT to integrate the balance of site works with the tower and Ribbon elements.

SEGL is committed to retaining FJMT as the lead architect for the upcoming design phases of Mod 13 which will include post-lodgement, determination, post-determination, and the construction phases of the scheme.

If required, a condition could be incorporated into the Major Project Approval that confirms this intent, as follows:

In relation to the Mod 13 tower and Ribbon elements, the design architect is to be retained to be involved in the delivery of design documentation, contract documentation and construction phase of the scheme to deliver consistency with the design of the Proposal delivered under the Alternative Design Excellence process. The design architect:

(i) is to have full access to the site and is to be authorised by the applicant to respond directly to the consent authority where information or clarification is required in the resolution of design issues throughout the life of the project;

(ii) evidence of the design architects commission is to be provided to the Department of Planning and Environment prior to release of a relevant Construction Certificate”

It is noted that the lead architect may work in association with other architectural practices but is to retain a leadership role over design decisions.

9 ENVIRONMENTAL ASSESSMENT

This section of the EAR identifies any potential environmental impacts which could arise as a result of Proposal, and identifies mitigation measures to be implemented to manage these impacts where necessary.

9.1 METHODOLOGY OF ASSESSMENT

Section 9 provides an assessment of the environmental impacts of the Proposal in accordance with the SEARs at **Appendix A**, **Section 10** provides a summary of the proposed mitigation measures, and **Section 11** provides overall conclusions on the environmental assessment against the SEARs.

The methodology used in the assessment and conclusions over **Section 9**, **10** and **11** has been described below.

SEAR 1 requires the EAR to demonstrate that *‘the Proposal has limited environmental impacts beyond those already assessed for project approval MP 08_0098 and any subsequent modifications to that approval.’* It is noted that this required is not a standard requirement for section 75W modification applications, and is understood to have been based upon an observation made by Basten J in the NSW Court of Appeal case of *Barrick v Williams* (2009) 168 LGERA 43. Basten J stated that a modification of a project approval *“...was something intended to have limited environmental consequences beyond those which had been the subject of assessment.”*

The methodology for the environmental assessment of the Proposal has been informed by the concept of ‘limited environmental impacts’ and comprises two types of analysis:

- ◆ Firstly, this EAR evaluates the Proposal from a merits perspective with regard to the SEARs issued for the Proposal. This represents the standard merits assessment that must accompany and support all requests for modification under section 75W. This analysis includes an assessment of the Proposal against the individually identified SEARs (**Appendix A**), and relevant statutory planning and policy provisions.
- ◆ Secondly, to address the final component of SEAR 1 which relates to ‘limited environmental impacts’, this EAR considers the environmental impacts of Mod 13 in relation to those environmental impacts that have been assessed for MP08_0098 to date.

The assessment of the impacts has been informed by the extensive and comprehensive inputs from various consultants in the project team covering a wide range of technical aspects. This process has included the following steps:

- ◆ Assessment of the current impacts of the Approved Project (MP08_0098 up to and including Mod 14). Since the original approval for MP08_0098 was granted on 9 December 1994, the project has undergone several modifications. For the purpose of the comparative environmental assessment of Mod 13 under SEAR 1, the baseline environmental impacts of the Approved Project have been defined as all those impacts that have been assessed up to and including Mod 14.
- ◆ Review of the preliminary scheme for the Proposal against the relevant SEARs, legislation, policies, and guidelines to assess compliance/departure.
- ◆ Iterative design development with recommendations from project team to ensure the final scheme for the Proposal can meet the requirements set out by the SEARs.
- ◆ Consultation with various agencies and authorities to ensure the Proposal can address their concerns and requirements.
- ◆ Merit assessment of the Proposal for each specific aspect of the project within its physical, social, economic or strategic context (as relevant), and against the applicable SEARs/legislation/policies/guidelines (**Section 9**).
- ◆ With respect to each topic identified in the relevant SEARs, this EAR compares the environmental impacts that have been assessed as part of the Approved Project to the environmental impacts of the Proposal and provides a conclusion on whether the impact is positive (i.e. a benefit), neutral, or negative (**Section 9**).
- ◆ Where the EAR identifies a negative environmental impact, it considers any mitigation measures that can be implemented to manage those impacts. The EAR then determines whether those mitigated impacts will be limited beyond those already assessed for the Approved Project (**Section 9** and **10**).

- ◆ Conclusion of environmental impact for each aspect – positive, neutral, or limited (based on implementation of the mitigation measures) (**Section 11**).
- ◆ Finally, this EAR provides conclusions as to whether the Proposal, as a whole, has limited environmental impacts beyond those already assessed (**Section 11**).

9.2 SETTING AND CONTEXT

The Pyrmont Peninsula was substantially developed in the 19th century as a working class industrial and port community. As industry declined during the post-world war II era and residents relocated to the outer suburbs of Sydney, the area started to decay. In 1990 the City West Development Corporation was established with the core aim of rejuvenating the precinct. Since this initial period of renewal Pyrmont has experienced continual transformation and evolution, once again becoming a focal point for residents and commercial activity.

As a consequence of these periods of growth, decline and renewal the urban context of Pyrmont is significantly varied incorporating fine grain historic terracing housing in the context of large former warehousing and manufacturing sites that have been converted or redeveloped. The area continues to undergo renewal and would be broadly considered as an area in transition, with future redevelopment opportunities likely to be informed by large scale redevelopment occurring within the immediate and broader context of the site.

Accordingly, the proposed development has been considered against two contextual backdrops,

- ◆ one the current urban context informed by historic buildings and established projects reflecting a mix of low rise fine grain development interspersed with low to medium rise large format development; and
- ◆ the other an emerging urban context defined by taller, slender building forms of diverse architectural styles and finishes.

To ensure that the proposed development recognised and responded to these contextual challenges, in-depth analysis to inform the siting, design and compatibility of the Proposal with the surrounding urban context has been a critical part of the project development. This commitment by SEGL is reflected range of documents, including:

- Urban Context Report, prepared by Urbis (Urban Design);
- Architectural Design Statement prepared by FJMT; and
- A Contextual Analysis Report prepared by Urbis (Urban Design).

This work was then critiqued through a peer review of the Urban Design and Contextual Analysis reports by Olsson and Associates Architects.

This section considers the outcome of these assessments and how they have addressed, the following matters raised in SEAR 2 Built Form and Design Excellence:

- *Clearly present a robust urban design analysis that evaluates alternative options for the location of the hotel and residential tower and demonstrates how the preferred built form and envelope minimises environmental impacts and provides the best design solution for the site and local area.*
- *Address the height, bulk and scale of the proposed development within the context of the locality.*

9.2.1 Location of Tower

Detailed site investigation was undertaken to inform the decision regarding the location of the tower. Initial investigations considered four potential options for the location of the tower, detailed assessment of the options for the location of the proposed tower is contained in section B.1 of the Urban Context Report provided at **Appendix G**, these are summarised in **Figure 53** and **Table 19** below.

Table 19 – Summary of Options for proposed tower

Option	General site location	Form	Matters considered
1	Southwest portion of the site – over the Lyric Theatre	A single tall tower form	<ul style="list-style-type: none"> ◆ Substructure capacity limitations; ◆ Likely environmental impacts arising from location. In particular potential to cause overshadowing impacts on adjacent sites and the public domain; ◆ Limitation imposed by existing ownership as well as existing leasing arrangements
2	North-western portion of the site adjacent to the Astral Hotel	Lower form, single tower form	<ul style="list-style-type: none"> ◆ Spatial limitations imposed by existing building forms; ◆ Separation distances required between existing building forms; ◆ Potential amenity impacts arising from location on site and proximity to established on site development.
3	South-western portion of the site, along Pyrmont Street frontage adjacent to the Astral Apartments	- Lower and wider building form. Single tower	<ul style="list-style-type: none"> ◆ Spatial limitations imposed by existing building forms; ◆ Separation distances required between existing building forms; ◆ Potential amenity impacts arising from location on site and proximity to established on site development.
4	North-eastern portion of the site	A single tower form	<ul style="list-style-type: none"> ◆ Structurally acceptable ◆ Capable of providing suitable separation between established residential and accommodation uses; ◆ Limited environmental impacts on existing on site development and adjacent land, including private sites and the public domain

Combined with the matters set out in the table above, option 4 was preferred due to the following:

- ◆ Limited interruptions to the operation of the light rail services and the internal service road;
- ◆ Minimised noise and vibration impacts (during construction) on the Astral Hotel and Astral Residences;
- ◆ Minimised interruptions and interference with existing hydraulic, electrical, and mechanical services across the site;
- ◆ Enabled the key uses within The Star such as the Sovereign, the MUEF, and the Lyric Theatre to continue operation during construction of the tower; and
- ◆ Allowed redevelopment to occur in the immediate future because the northern portion due to established leasing arrangements (i.e. SEGL the proponents for Mod 13 hold the lease for this portion of the site).

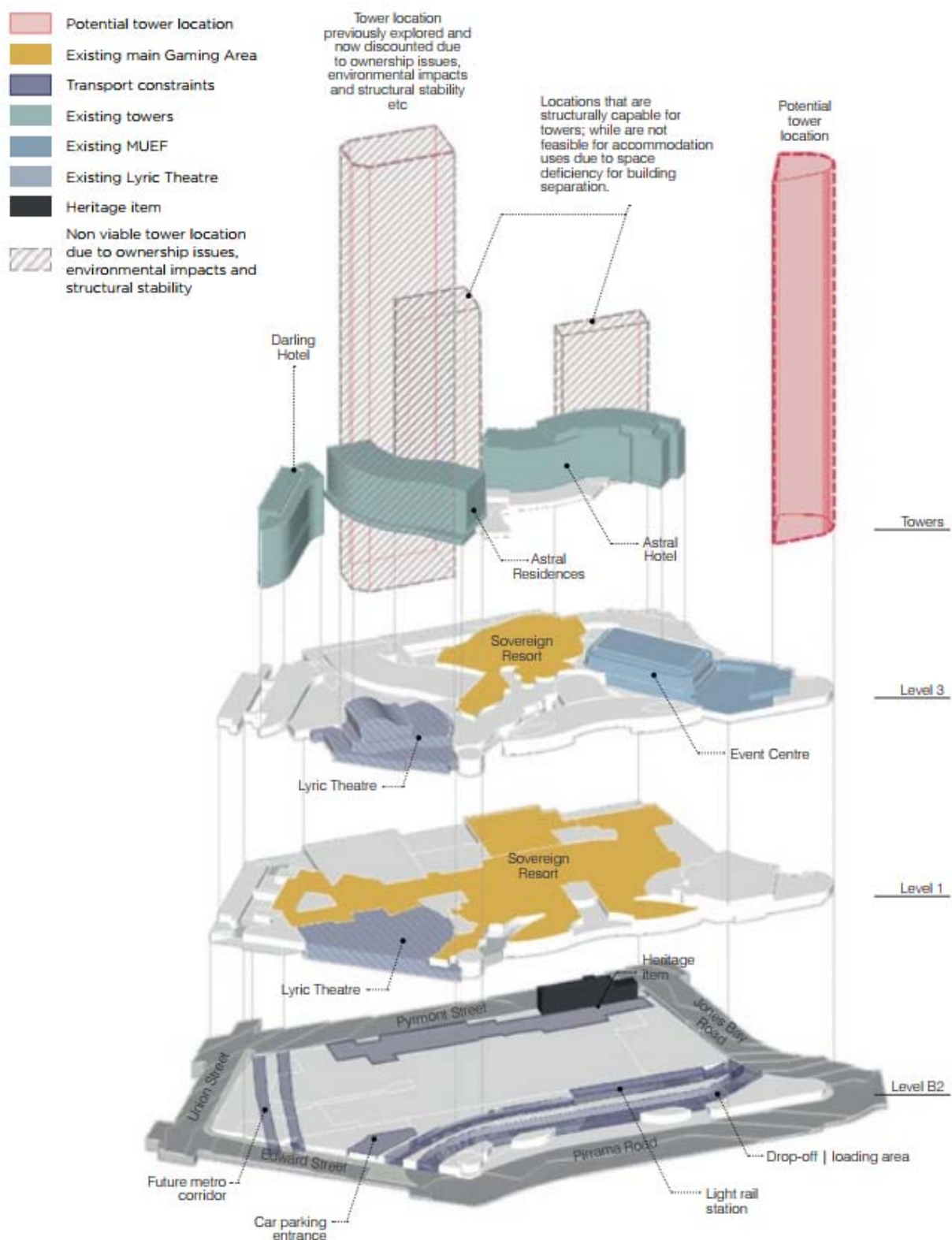


Figure 53 – Summary of alternative locations considered for Mod 13 Tower

9.2.2 Defining the Urban Context

Recognising the visible nature of the proposed development the urban context has been defined and assessed at strategic, precinct and local levels. At the strategic and precinct level, the urban context is informed by broader renewal and development works occurring within the City of Sydney and surrounding precincts including the Bays Precinct. These processes and their influence on the urban form and setting are considered in **Section 9.2.4**, and are predominantly defined by a City skyline in transition resulting in an emerging context.

Combined with the emerging context, the Proposal has been considered in the local context of Pyrmont.

Detailed contextual analysis was undertaken in the preparation of an initial Urban Context Report (**Appendix G**) that led to the identification of 13 guiding site development principles. These principles include:

- ◆ *Heritage: maintaining and interpreting importance heritage aspects of the site (i.e. the SELS building);*
- ◆ *Respond to the defined form of the site: maintaining lower built form elements along the Pyrmont Street frontage in response to local heritage buildings while embracing opportunities to increase scale;*
- ◆ *Development Potential and Capacity;*
- ◆ *Enhance multi-nodal public transport opportunities;*
- ◆ *Improve Pedestrian movement and connectivity;*
- ◆ *A recognisable foreshore landmark;*
- ◆ *Improve the diversity of waterfront experiences;*
- ◆ *Provide a parkland setting;*
- ◆ *Recognise historic values through materiality: Incorporation of sandstone elements to street level podium as a means of connecting with heritage elements in the precinct;*
- ◆ *The Star as an International Destination;*
- ◆ *Provide neighbourhood spaces;*
- ◆ *Contribute positively to the Sydney Skyline; and*
- ◆ *Respond to the emerging character.*

The 13 site development principles became the foundation of the FJMT design development as set out in the Architectural Design Statement provided at **Appendix C** and aimed to achieve a final form that responded to the defined urban context.

Following finalisation of the design by FJMT, a further Contextual Analysis Report was undertaken by Urbis to consider the Proposal within various local settings. The aim of the Contextual Analysis Report (**Appendix XX**) was to analyse the impact of the Proposal on the urban context, current and emerging. To determine the potential for impact, a series of before and after views were prepared to determine the key locations from which the Proposal would be visible, and where visible, to identify the impacts resulting from the changed relationship of The Star to the surrounding urban elements.

The process of analysis identified 11 sites from which the Proposal would be visible, these vantage points are shown in **Figure 54**. To determine the potential for impact a series of before and after views were developed to support an assessment of potential impacts with an emphasis on understanding the potential for the Proposal to alter the relationship of The Star to its urban context.

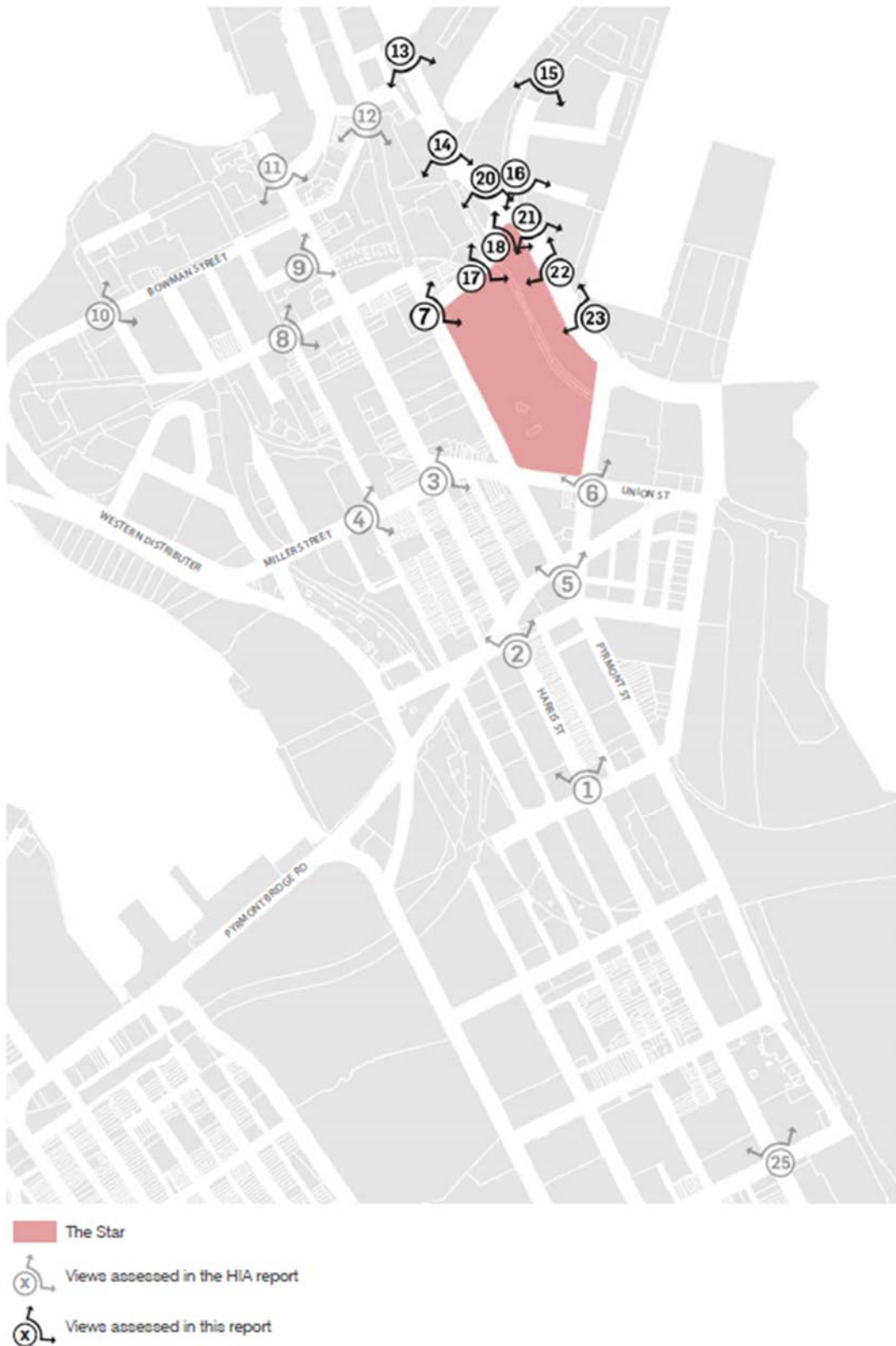


Figure 54 – Summary of alternative locations considered for Mod 13 Tower

9.2.3 Current Urban Context

As outlined in the introduction to this section, the current urban context of The Star is a mix of fine grain and large format heritage buildings, interspersed and punctuated by modern development. In order to considered the suitability of the proposed development within this varied built form environment.

The immediate area contains several listed heritage items and these matters insofar as they influence built form, material and typology are addressed within this section with detailed assessment of potential impact on heritage values refer to **Section 9.21**.

The Contextual Analysis Report (**Appendix XX**) resolves that at a local level the development will contribute positively to the urban context of Pyrmont through:

- ◆ a balanced built form and scale, when considered in the context of surrounding large scale development such as Jacksons Landing;
- ◆ the positive contribution of proposed podium in contributing to human scale, visual interest and activation at the street level within Pyrmont;
- ◆ the improved casual surveillance of adjacent streets through incorporation of ground level activation and opportunities to overlook the street; and
- ◆ improved wayfinding and legibility achieved through the incorporation of clearly distinguishable and separated entries to the residential apartments, entertainment facilities and hotel.

An overview of the contextual compatibility of the Proposal with the local urban environment, based on the 11 vantage points assessed in the Contextual Analysis Report is provided in **Table 20**. The overall built form relationship of The Star within the current urban context of the Pyrmont Peninsula, pre and post development of the proposed tower development is shown in **Figures 55 and 56**.

Table 20 – Summary of Urban Context

Context Element	Map Ref.	Context Definition	Context compatibility
Overall Massing	N/A	The local context of Pyrmont include the area of the Pyrmont Peninsula. Union Street to the south of The Star forms a key axis, framed by lower height buildings. To the west and beyond Pyrmont Street, urban form is defined by the increased scale and form of Jacksons Landing that are predominantly orientated to address the waterfront.	<ul style="list-style-type: none"> ◆ The location of the proposed tower compliments and mirrors development that has occurred to the northwest of the site, Jacksons Landing, locating the tallest element (the proposed tower) towards the waterfront allowing for a stepped form and scale back down towards Union Street;
SELS building (heritage item), Jones Bay Road and Waterfront	7	<p>The intersection of Pyrmont Street and Jones Bay Road. This view is framed by heritage items rising to medium range buildings along Jones Bay Road.</p> <p>The existing Star development responds to this context by maintaining a four (4) storey podium height all the way to the waterfront</p>	<ul style="list-style-type: none"> ◆ Mod 13 maintains a consistent podium height along the Pyrmont Street frontage, responding to the form and scale of the heritage listed SELS building. ◆ New uses at ground level will provide activation of Jones Bay Road contributing positively to the public domain. ◆ The tower element responds to the amenity benefits of the waterfront setting.
Global Waterfront Precinct - Gateway	13, 14, 15	The Pyrmont Peninsula along views looking south and west are currently indistinct with no visual markers.	<ul style="list-style-type: none"> ◆ The proposed tower will provide a visual marker contributing to wayfinding and define the gateway arrival to the waterfront precinct.

			<ul style="list-style-type: none"> ◆ The neighbourhood centre will provide street level activation and promote casual surveillance.
Jones Bay Road and Pirrama Road	16 - 20	<p>Ground level lacks activation and opportunities for casual passive surveillance along Jones Bay Road and Pirrama Road.</p> <p>The site is not clearly distinguished to stand out, legibility and wayfinding opportunities could be improved.</p>	<ul style="list-style-type: none"> ◆ The Proposal responds to and positively contributes to the urban context through: ◆ Activation of the street through design and orientation of the neighbourhood centre to connect with the adjacent streetscapes; ◆ Clearly defined and separated entry ways to the residential tower, neighbourhood centre, hotel and entertainment areas; ◆ Carefully designed facades that incorporate upper level setbacks to provide human scale at street level; ◆ Use of glass facades at street level to reduce visual bulk and mass on the street edge and further enhance passive surveillance and security.
Jones Bay Road	21 – 23		<ul style="list-style-type: none"> ◆ The Proposal responds to and positively contributes to the urban context through: ◆ Use of sandstone materials to establish a visual and historic connection to the existing urban context; ◆ Use of glass facades at street level to further enhance passive surveillance and security ◆ Incorporation of a Porte Cochere, setback from the existing street alignment, to create a safe pedestrian environment; ◆ Activation of the ground floor/street level through the incorporation of food and beverage premises; ◆ Clearly distinguishable entries through changes in materials and effective signage.



Figure 55 – Current Urban Context (without Mod 13)



Figure 56 – Current Urban Context (with Mod 13)

On balance while the Proposal, will be visible from vantage points and alter the relationship of the site within the local urban context, this change will be positive creating active and safe spaces at ground level while contributing positively to the public domain and access to the light rail station by removing the existing wall barrier to the Pirrama Road frontage.

The increased scale of development on the site, due to the tower element located in the north-east of the site adjoining the waterfront is consistent with the established development pattern and overall massing, such as Jacksons Landing, Barangaroo, Cockle Bay and Darling Harbour that position building of increased scale close to waterfront precincts.

9.2.4 Emerging and Future Urban Context

Pymont's location within the Global Waterfront Precinct of Sydney City is positioned to be visually transformed over the next 20 – 30 years by discrete private development opportunities such as the ICC Hotel and large scale Government driver revitalisation and renewal projects such as Barangaroo, Darling Harbour and the Bays Precinct.

As shown in **Figure 57** key redevelopment opportunities around Darling Harbour and within the visual catchment of the site are contributing to an urban form in transition, that reflects:

- ◆ a new visual context for Darling Harbour defined by the development of Barangaroo establishing Sydney's Global Waterfront Precinct;
- ◆ the emerging trend for tower form development within Darling Harbour locating a cluster of towers ranging from 168m to 253m in height along the eastern foreshore of the precinct;
- ◆ the emerging skyline locates the tallest buildings towards the entrance to Darling Harbour, framing the precinct. The built form generally tapers down towards the base of the waterfront;
- ◆ the recently completed ICC hotel (133m) and the proposed tower as part of the Harbourside redevelopment (166m) form the emerging skyline along the eastern foreshore of the precinct, reflecting the scale of the western foreshore of the precinct.

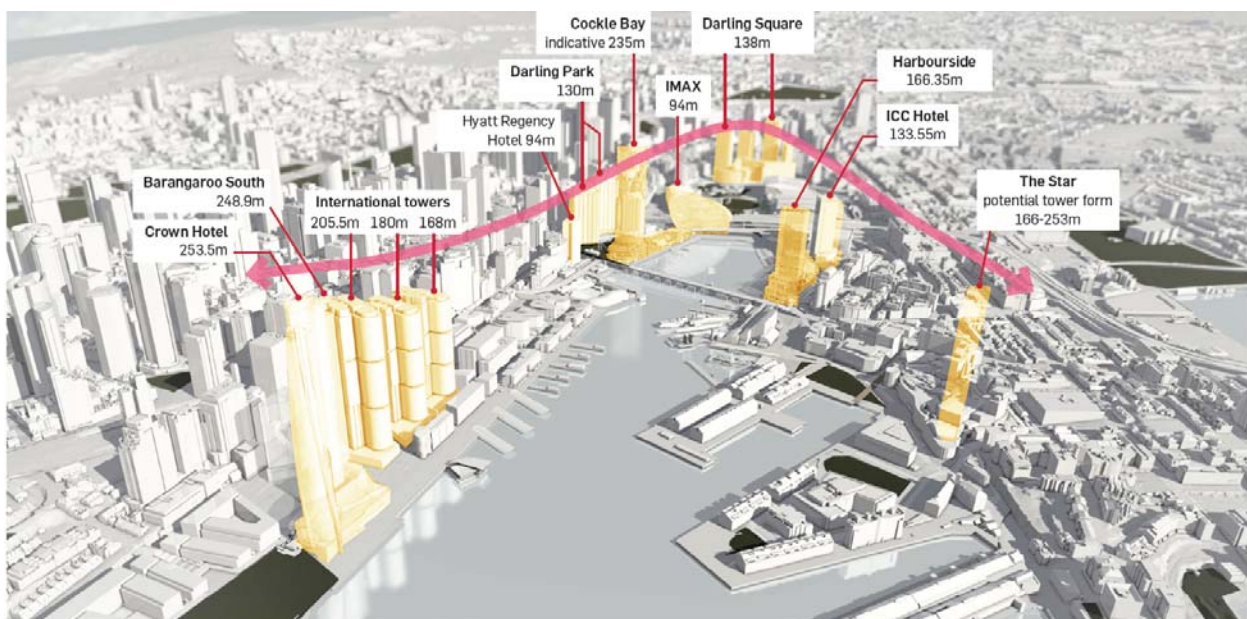


Figure 57 – Emerging Urban Context for Mod 13

Future waterfront development within the Bays Precinct has the potential to increase the scale of its immediate surrounds and establish a new context for the renewal of the precinct as a whole. The proposed scale of the Ritz-Carlton tower is therefore considered to be in keeping with the scale set by development in the wider area, as well as the envisaged future urban context of the site and its surrounds.

9.2.5 Olsson and Associates Peer Review of Urban Context Report and Contextual Analysis

A Peer Review (**Appendix YY**) has been undertaken of the Urban Context Report (**Appendix G**) and the Contextual Analysis (**Appendix XX**). The Peer Review considered the methodology of the two reports and provided further analysis of the Ritz Carlton tower in relation to its urban context. The Peer Review endorsed the methodology of both reports and

concludes that in relation to urban context, the tower creates an iconic corner for Darling Harbour, while transitioning to the local context of Pyrmont.

9.2.6 Conclusion

Mod 13 will deliver a piece of landmark architecture that creates an iconic corner for Darling Harbour, while ensuring an appropriate transition to the local context of Pyrmont.

The Proposal will result in a substantial revitalisation of the streetscape and public domain surrounding the site including the revitalisation of several entry points of the site. The improvements to Jones Bay Road and Pirrama Road will increase activation of the adjacent streets contributing to a public realm that is active, legible, safe and interesting.

The location of the tower has been chosen to respond positively to various constraints and considerations including existing building, heritage, transport operations, structural capacity, servicing and operational factors. Moreover, the built form and associated height of the proposed tower and podium are isolated to a discrete and comparatively small area of the site. The tower and podium have a footprint of approximately of 3,409m², which equates to 8.7% of the overall site area of 39,206 m².

Notably, the Proposal's height, bulk and scale are consistent with other projects in Darling Harbour / Bays Precinct which is an area of significant change within Sydney. The architectural form of the tower and podium exhibits design excellence and have been developed to ensure solar access to key public spaces, including Union Square and Pyrmont Bay Park, is maximised.

The Proposal is considered to respect and enhance both the current and emerging urban context of the local and wider areas.

9.3 VISUAL IMPACT

The SEARs state that *"A visual impact assessment must be undertaken to identify the visual changes and view impacts of the development"*. The SEARs specified a range of guidelines and policies that were required to be followed in the preparation of a Visual Impact Assessment (VIA), including the identification of minimum of 23 view locations and visual catchment to be assessed for potential impact.

Architectus has prepared the VIA provided at **Appendix H**. The basis of the assessment included the following:

- ◆ The SEARs for the project.
- ◆ The relevant planning framework for the site (as noted within the SEARs) as it relates to visual impact.
- ◆ Land and Environment Court Planning Principles for the assessment of views and visual impact, which set principles for the consideration of visual impact in New South Wales, particularly where this is not further defined within the Planning Framework.
- ◆ Land and Environment Court standards for photomontages.
- ◆ Previous VIAs for the site.

A summary of the methodology used to by Architectus is provided in **Figure 58**. The assessment criterion used to determine impacts included the identification of the following:

- ◆ **Importance of the view:** high, moderate-high, moderate, low-moderate, and low, based on categorisation criteria including number of viewers and period of view; and
- ◆ **Visual impact rating:** high, moderate-high, moderate, low-moderate, low, none/negligible, based on a qualitative impact assessment of the Proposal on the view.

The criteria of each were adapted to respond to varying importance of public and private view impacts.

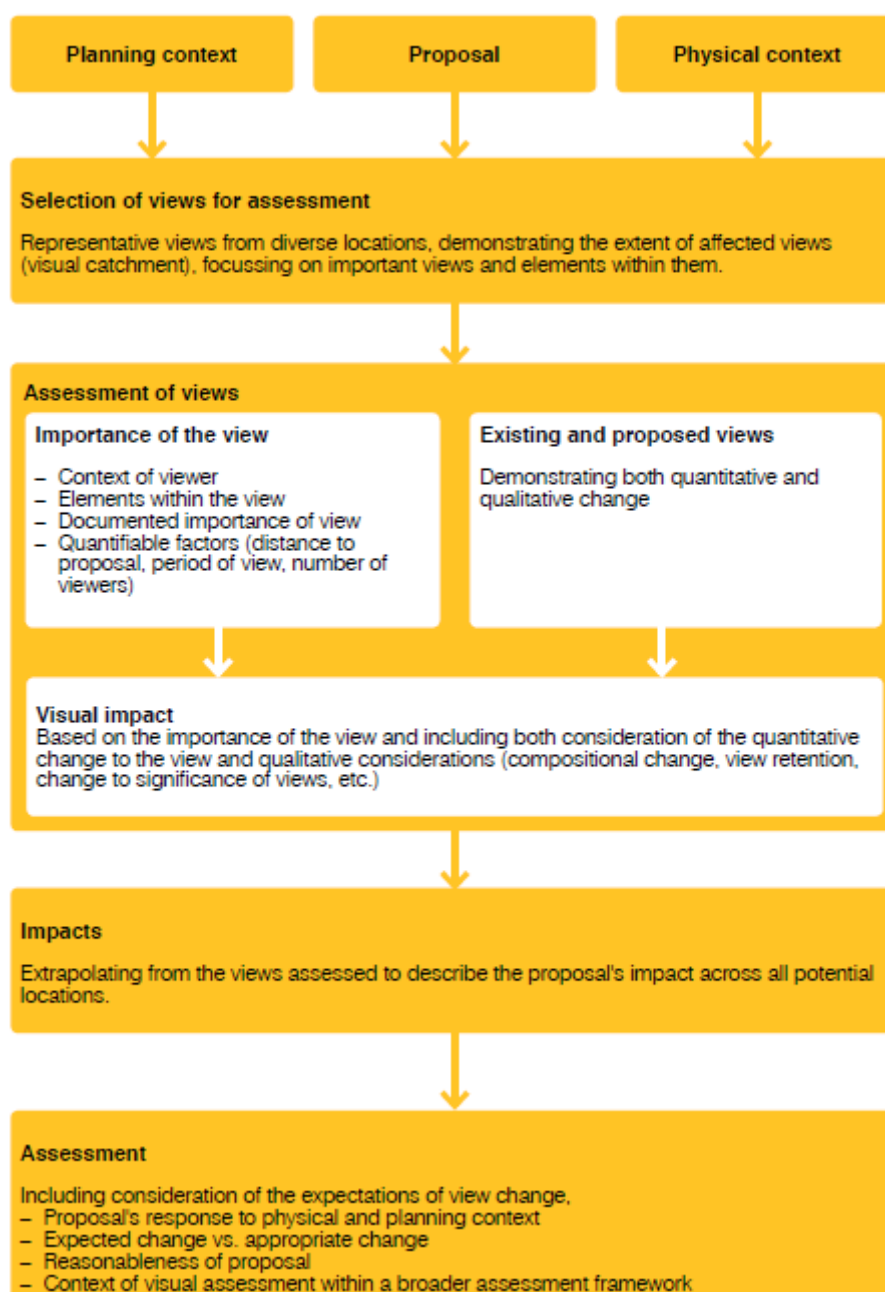


Figure 58 – Visual Impact Assessment Methodology (Source: VIA; p. 20)

The VIA has assessed the application within the existing urban context while giving regard to the future urban character. The assessment of likely future urban character and the appropriateness of the Proposal has been clearly distinguished from the primary visual impact assessment on the existing context and views. A peer review undertaken by Richard Lamb and Associates (**Appendix ZZ**) notes that this is an important distinction in the methodology of Architectus, as this approach allows for a clear qualitative and quantitative assessment of impacts.

In the opinion of Richard Lamb, the assessment undertaken by Architectus demonstrates an outstanding level of technical proficiency, going beyond the requirements of the SEARs in respect to the comprehensive coverage of potential view locations, range of viewing places and variety of viewing opportunities assessed, both private and public (**Appendix ZZ**, p. 6).

Overall, the Architectus VIA concludes that impacts on both private and public views are acceptable owing to the following:

- ◆ Impacts on private residences, could not be avoided or reduced through a *'more skilful design'* recognising the Proposal has gone through a rigorous design excellence process. On balance the impacts are reasonable as the areas of view loss experienced would have occurred with a development no more than 28 metres in height.
- ◆ The Proposal does not obstruct views of water, land-water interface or public places of heritage items or landmarks. Moreover, while the Proposal is highly prominent within many public views assessed it does not generally reduce the quality of these views or their ability to be appreciated;
- ◆ The existing open skyline view is likely to change over the next 20-30 years as the Bays Precinct is developed and further development occurs along the western side of Darling Harbour. Expected growth of Sydney westwards towards the Bays Precinct will create visual impacts on the city skyline, this changing view will 'ground' the new tower within the built form of the city context.

The conclusions of the Architectus are echoed by Richard Lamb, who further notes that:

- ◆ The assessment of impact on public domain views is well based and the criteria consistently applied with the narrative of decisions reached clearly and adequately explained.
- ◆ The merits of the application in terms of view sharing in the private domain respond appropriately to the consideration of "reasonableness" posed by the LEC planning principle of *Tenacity*. Assessment of view sharing rightly considers the impact of approved development under Mod 14 as part of the "intended character in the views" and finds the conclusions well valid and well considered.

Overall Richard Lamb notes that the assessment of impact is intrinsically conservative owing to the methodology and assessment criteria established and applied by Architectus throughout the VIA.

The following sections consider in detail the assessment contained within the Architectus VIA.

9.3.1 Assessment of Impacts on Public Domain Views

The VIA has undertaken assessment of Public Domain Views and Vistas in relation to the following aspects:

- ◆ The potential for the Proposal to impact on existing public views; and
- ◆ Impacts on future character, including city skyline views.

In accordance with the SEARs the assessment of potential impact on public domain views has been undertaken in accordance with the five step process established by Senior Commission Moore, in particular the matters of *Rose Bay Marina vs Woollahra Municipal Council and anor [2013] NSW LEC 1046*.

The established planning principle process is as follows:

1. *Identify the scope of the existing views from the public domain (44). This should consider:*
 - *the nature and extent of any existing obstruction of the view;*
 - *compositional elements of the view;*
 - *what might not be in the view - such as the absence of human structures in the outlook across a natural area;*
 - *is the change permanent or temporary; or*
 - *what might be the curtilages of important elements within the view.*
2. *Identify the locations in the public domain from which the potentially interrupted view is enjoyed (45);*
3. *Identify the extent of the obstruction at each relevant location (46);*
4. *Identify the intensity of public use of those locations and where the enjoyment of the view will be obscured (47);*
5. *Review any document that identifies the importance of the view to be assessed (48).*

As part of the assessment of impact specific regard has been given to the potential for the Proposal to impact on views to and from Sydney Harbour. This assessment has considered the Proposal against the relevant provisions of the Harbour SEPP and the associated Sydney Harbour Development Control Plan (SHDCP).

IDENTIFICATION OF PUBLIC VIEWS

A preliminary photographic assessment of the site included 101 views as potential views to be analysed. These views fully address the locations and categories set out in the SEARs for consideration.

The preliminary consideration of views was assessed in accordance with the criteria set out in section 2.7 (p.32) of the VIA. The criteria establish view importance, defined in both qualitative and quantitative terms, to include the following:

- ◆ View location, including
 - documented importance (ranked High to low);
 - The relative number of viewers (from >1,000 people per day to <100 people per day);
 - the period of the view (long term >5 minutes to moderate 1- 5 minutes); and
 - distance to the Proposal and view context; and
- ◆ Elements within the view
 - iconic, water and composition
 - existing composition of the view and any existing obstruction to the view

The outcome of this preliminary assessment is summarised diagrammatically in **Figure 3.1.1** and the *selection of view for detailed assessment* Tables provided on pages 38 to 40 of the VIA. A total of 24 views were selected for detailed photomontage analysis. Views selected for detailed analysis were identified on the basis of;

- ◆ View locations of documented importance;
- ◆ Considering a range of views from different locations;
- ◆ Views which have high preliminary categorisations of importance of the view and/or potential for visual impact; and
- ◆ At least one example from each view type, that view that best represents the amenities and character of the area.

The outcome of the detailed assessment of public domain views concluded the following potential view impacts as a consequence of the proposed development:

- ◆ **Moderate-High Impact** – three view locations including the eastern side of the Darling Harbour foreshore between Pyrmont Bridge and Central Barangaroo.
- ◆ **Moderate Impact** – 14 view locations including:
 - A wider area of Darling Harbour foreshore (Barangaroo Headland Park, Cockle Bay, parts of the foreshore of Balmain, White Bay, Blackwattle Bay);
 - Pyrmont Bridge West;
 - Observatory Hill;
 - Eastern Pyrmont (Pirrama Park, Pirrama Road, Pyrmont Bay Park, Giba Park);
 - Union Square; and
 - Martin Place near Macquarie Street.
- ◆ **Low-Moderate Impact** – five locations including:
 - Rozelle Bay and parts of Blackwattle Bay;

- Glebe foreshore parks; and
 - North of the Harbour including Balls Head Reserve, McMahon's Point Lookout, Milsons Point Wharf.
- ◆ **No Impact or Low Impact** – two locations including the Gladesville Bridge and Martin Place between Pitt St and George St.

The VIA finds that the public domain views most impacted by the Proposal are:

- ◆ Views from the eastern side of Darling Harbour, within which the Proposal will be prominent in a location where no tall buildings exist at present, however will not obstruct the harbour view which is the focus of importance at these locations; and
- ◆ A range of other public domain views from around Darling Harbour, White Bay and Blackwattle Bay/Rozelle Bay, where again the Proposal will be prominent within the view however will not obstruct water views or other elements of strong importance to the overall view.

In relation to impacts of the tower on public domain views, the VIA finds that:

- ◆ The Proposal does not obstruct elements within these views which are ascribed significance through the applicable Planning Principles or Planning Framework including the land-water interface, iconic views (i.e. the Opera House or Harbour Bridge), Sydney Harbour, and view corridors between public places;
- ◆ The Proposal does not significantly affect sky views along streets, including those defined in the Draft Central Sydney Planning Strategy, with the exception of a small intrusion into the Martin Place view; and
- ◆ The existing view will largely remain to be appreciated in the majority of views, including the key elements of importance as described above. The highest impacts are due to a compositional change in the view where the Proposal is prominent in a location with no existing taller buildings.

The VIA provides the following conclusion regarding the appropriateness and acceptability of these impacts:

- ◆ The site is located within an area that is strategically accepted for growth and therefore a high degree of change within views is considered reasonable provided important elements of the views are not obstructed;
- ◆ Other substantial developments in the local area have also been approved that will have a significant impact on views and changes the scale of the context in a similar way, including the Barangaroo International Towers as well as the future planned towers in Central Barangaroo, the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP), the Ribbon development to replace the former IMAX building, redevelopment of the Four Points Hotel, and Central Park; and
- ◆ Additionally, in considering its waterfront context, the tower element will be sit between the height of the approved Barangaroo towers and the ICC Hotel and therefore is in scale with its waterfront character. Additionally, future waterfront development within the Bays Precinct has the potential to be of a similar scale and so not be in keeping with the scale of its immediate surrounds and establishing a new context for the renewal of the precinct as a whole.

SYDNEY HARBOUR

While not strictly applicable in the context of a section 75W application, the provisions of the Harbour SEPP and the associated Harbour DCP have been considered in the context of the potential view impacts.

It is noted that Architectus has recognised the requirements of the Harbour SREP and DCP in their identification of both private and public views (refer to sections 2.3.2 and 2.3.3 combined with the table of documented importance of view – public domain on p. 26 of **Appendix H**).

The Star is identified as being partly on land within the Foreshore and Waterway Area adopted under the Harbour SEPP. The characteristics of the site and the surrounding land is further evolved on planning Map 8 of the Harbour DCP. This mapping layer indicates that land within the immediate surrounds of the site is not identified as containing any landmarks or heritage items and landscape features are noted as being “urban development with scattered trees”. Notably a “landscape character type” for the purpose of applying section 3 *Landscape Assessment* of the DCP is not ascribed to the site or the adjacent waterfront area generally.

Notwithstanding the above, Architectus in section 2.4 (p. 26) of the VIA identifies 11 landmark items, 14 local heritage items and 12 state heritage items as being located within the visual catchment of the site. These views have been assessed for impacts in the public domain view assessment that considered 101 views in the preliminary assessment.

Notably of the 24 public domain views identified for detailed assessment 16 were views to or from the Harbour all of which were categorised as having a “High” public view importance. The table below provides a summary of the assessment outcome.

Table 21 – Summary of Harbour view assessments by Architectus

View No	View Type	Key documented importance of views	Potential for visual impact
P1	Distant View – Milsons Point	From Harbour and a public place, including Luna Park	Low-Moderate
P2	Distant View – McMahons Point	From Harbour and a public place,	Low-Moderate
P3	Distant View - Balls Head	From Harbour and a public place,	Low-Moderate
P5	Distant View - Barangaroo	From Harbour and a public place,	Moderate
P6	Distant View - Barangaroo	From Harbour and a public place,	Moderate-High
P9	Distant View – Darling Harbour	From Harbour and a public place,	Moderate-High
P10	Distant View – Darling Harbour	From Harbour and a public place,	Moderate to High
P11	Distant View – Darling Harbour	From Harbour and a public place, includes the Pyrmont Bridge	Moderate to High
P12	Distant View – Darling Harbour	From Harbour and a public place, includes the Pyrmont Bridge	Moderate to High
P13	Distant View- White Bay	From Harbour and a public place, including Illoura reserve	Moderate
P14	Distant View- White Bay	From Harbour and a public place,	Moderate
P15	Distant View- White Bay	From Harbour and a public place,	Moderate
P16	Distant View- Rozelle & Blackwattle Bay	From Harbour and a public place,	Moderate
P17	Distant View- Rozelle & Blackwattle Bay	From Harbour and a public place, include Bellevue	Moderate

P18	Distant View- Rozelle & Blackwattle Bay	From Harbour and a public place,	Moderate
P19	Regional View- Rozelle & Blackwattle Bay	From Harbour and a public place,	Low

Based on the analysis and outcome of the assessment undertaken by Architectus the following observations are made in relation to the relevant provisions of the Harbour SEPP and the associated DCP:

- ◆ The proposed development has undergone a rigorous design competition and assessment to ensure that the built form character will maintain, protect and enhance the unique visual qualities of the foreshore in accordance with clause 14 *Foreshores and waterways areas*. A detailed assessment of visual qualities and potential impacts on the Harbour and its foreshore areas as a consequence of the scale, form, design and siting of the Proposal has been undertaken in accordance with clause 25 *Foreshore and waterways scenic quality*. This assessment addressed the potential for impact on the site, land adjoining and the likely future context. The proposed development is not considered to compromise the unique visual qualities of the Harbour in this location, as it is located in an area of significant urban development as noted on the landscape character maps of the DCP.
- ◆ The Proposal is considered to be generally consistent with the provisions of clause 26 *Maintenance, protection and enhancement of views* with detailed assessment of views to and from Harbour is contained within the VIA. The proposed tower element of the Proposal will be visible from multiple vantage points around the Harbour. However, on balance the visibility of structures does not diminish the visual quality of the Harbour or its foreshore and the Proposal has not been assessed as adversely affecting the setting or qualities of identified heritage items.
- ◆ The Proposal is consistent with sections 3.2, 5.3 and 5.4 of the Harbour DCP, as the Proposal:
 - does not impact on landmarks or heritage items identified on the DCP planning maps and assessment in relation public places (to and from the Harbour) has determined that potential impacts are within acceptable range;
 - despite presenting a contrasting scale or design to existing buildings, has taken care to ensure that this contrast would enhance the local and broader setting and maintain important views and vistas to and from the Harbour through rigorous siting investigation and design development. In particular, the VIA notes that the design of the tower element mitigates its visual impact in key views through articulation of the long façade of the Proposal to break down its visual bulk into different vertical elements.

The VIA concludes that the Proposal's impacts, including cumulative impacts, on public views, are reasonable and acceptable within the current built form and planning context, and notes the following:

- ◆ The development of Barangaroo, the ICC hotel and other developments around Darling Harbour change the emerging context.
- ◆ Acceptance in strategic documentation of the westward expansion of the City to include the Bays Precinct.

The VIA concludes that in all public domain views considered, even those most highly impacted, the Proposal does not obstruct views of water and the land-water interface, which are typically the most important elements within the views.

While the Proposal is not similar in scale to its immediate surrounds, it is appropriate to its emerging context within an area of significant change within Sydney. This context includes recent developments and approvals such as Barangaroo and the ICC Hotel as well as future urban transformation of the Bays Precinct.

The impact of the Proposal on public domain views is considered acceptable and reasonable, as it does not affect the elements of ascribed importance within views (including water views, public places, heritage and iconic elements) and instead is primarily a compositional change within a context where significant urban regeneration and growth is strategically envisioned.

Based on the above the Proposal's impacts on public domain views is considered appropriate and acceptable.

9.3.2 Assessment of Impacts on Private Views

In accordance with the SEARs the assessment of potential impact on private views has been undertaken in accordance with the process established by Senior Commissioner Roseth, in particular the matter of *Tenacity Consulting v Warringah Council* [2014] NSW LEC.

The established planning principle process is as follows:

1. Assess the view to be affected by establishing the value of the view (26) *"water views are valued more highly than land views. Iconic (e.g. 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, e.g. a water view in which the interface between land and water is visible is more valuable than one in which it is obscured"*.
2. Consideration from what part of the property views are obtained (27) *"For example the protection of views across side boundaries is more difficult than the protection of views from front and rear boundaries. In addition, whether the view is enjoyed from a standing or sitting position may also be relevant. Sitting views are more difficult to protect than standing views. The expectation to retain side views and sitting views is often unrealistic"*.
3. Assessment of the extent of the impact. At 28: *"this should be done for the whole of the property, not just for the view that is affected. The impact on views from living areas is more significant than from bedrooms or service areas (though views from kitchens are highly valued because people spend so much time in them). The impact may be assessed quantitatively, but in many cases this can be meaningless. For example, it is unhelpful to say that the view loss is 20% if it includes one of the sails of the Opera House. It is usually more useful to assess the view loss qualitatively as negligible, minor, moderate, severe or devastating"*.
4. Assessment of the reasonableness of the Proposal. At 29: *"A development that complies with all planning controls would be considered more reasonable than one that breaches them. Where an impact on views arises as a result of non-compliance with one or more planning controls, even a moderate impact may be considered unreasonable. With a complying Proposal, the question should be asked whether a more skilful design could provide the applicant with the same development potential and amenity and reduce the impact on the views of neighbours"*.

Six properties within the immediate context of the site were identified as being potentially affected by the Proposal:

- ◆ 88 John Street, Pyrmont;
- ◆ 24-26 Point Street, Pyrmont; and
- ◆ 2 Jones Bay Road, Pyrmont.
- ◆ 21 Cadigal Avenue;
- ◆ 8 Distillery Drive in Pyrmont; and
- ◆ Views from the Astral Residences.

The consideration of view impacts was assessed in accordance with the criteria set out in section 2.7 (p.33) of the VIA. The criteria used to establish view importance in relation to private views was similar to that utilised in relation to public domain views, defined in both qualitative and quantitative terms, to include the following:

- ◆ View location, including document importance (ranked High to Low); and
- ◆ Elements within the view
 - iconic, water and composition; and
 - existing composition of the view and any existing obstruction to the view.

The visual impact is a qualitative assessment, ranking impacts of the Proposal based on a change in the view from a particular vantage point. The VIA includes consideration of:

- ◆ the quantitative extent to which the view will be obstructed or have new elements inserted into the view by the Proposal;
- ◆ whether any existing view remains to be appreciated (and whether this is possible) or whether the Proposal will make the existing view more or less desirable, or the location more or less attractive to the public;
- ◆ any significance attached to the existing view by a specific organisation;
- ◆ any change to whether the view is static or dynamic.

The VIA has assessed 24 private domain views in detail, and makes the following conclusions:

◆ **High and moderate to high impacts:**

- Approximately 16 apartments in No. 2 Jones Bay Road, of which approximately 13 also received a 'high' impact from the previous Mod 7 approved works. The Proposal will remove the majority of the view which remaining after Mod 7.
- Approximately 14 apartments within the Astral Residences.

◆ **Moderate impacts (generally a significant portion of view is retained)**

- Apartments in 2 Jones Bay Road, No. 88 John Street, No. 24 & 26 Point Street, No. 8 Distillery Drive, No. 21 Cadigal Avenue and upper levels of the Astral Residences.

The planning principles for view sharing in respect of private views are established by *Tenacity Consulting v Warringah Council* [2004] NSWLEC 140, which states that *"a development that complies with all planning controls would be considered more reasonable than one that breaches them."*

Applying this principle, the additional height in the tower element of the Proposal will generally only obstruct views of the sky above a 28 metre LEP-compliant building envelope, whereas an LEP compliant building envelope would obstruct existing views of land, water, land-water interface, and land-sky interface. For this reason, the impact on private views as a consequence of the additional height of the Proposal above the SLEP Height of Buildings Control is minimal.

Elements of the design of the tower has supported view sharing outcomes, through the incorporation of an inset within the lower portion of the tower to help provide a greater 'gap' for private views along the axis of John Street.

While there are no specific requirements for a development to retain private views, the podium, ribbon and tower elements have been designed to enable view sharing in the broader context of the site and surrounding locality.

The VIA concludes the impacts of the Proposal on private residences and their views are acceptable because:

- ◆ The areas of the design which affect view loss of the most important elements (Darling Harbour, Sydney Harbour and the city skyline) for existing apartments are generally within the 28m Height of Building Control.
- ◆ Within the context of an acknowledged area of growth within Sydney, that is also within proximity to Central Sydney, it would be unreasonable to expect that views from most residences within a street-wall building should remain unobstructed.
- ◆ The Proposal has adopted an 'inset' at the lower-tower levels which widens the 'gap' for private views along the axis of John Street.
- ◆ With regard to the SDCP 2012's requirement that development provides a pleasant outlook (short range prospect), the Proposal responds appropriately.

Given the above conclusions, the impact on private views is considered to be reasonable and acceptable.

The Proposal's high impact on private views (where the majority of an existing view is lost) is limited to 14 apartments within the site and 16 apartments external to the site. The previous Mod 7 approval was considered to have a high impact on a similar number of units. This level of impact is considered to be a limited addition to that previously assessed. It is also consistent with other developments in the precinct (such as Barangaroo, the Ribbon, the Sydney International Convention, Exhibition and Entertainment Precinct).

The VIA has assessed the aspect of tower isolation as the tower will be visible from a wide range of views. The VIA finds *"that this visibility and prominence forms part of the overall consideration of impacts in the Proposal, though is generally less significant in visual impact terms to obstruction of views from and to key locations, which forms the focus of the planning framework"*. It concludes that *"the presence of a tall building on the site will not necessarily substantially change the visual context of these view locations"*.

9.3.3 Conclusion

A detailed and a thorough VIA has been undertaken by Architectus in accordance with the requirements of the SEARs as well as the LEC Planning Principles for view assessment. The methodology and criteria applied have been the subject of a peer review by Richard Lamb and Associates who has acknowledge the high level of technical proficiency and comprehensiveness of the assessment.

The VIA has considered impacts on public domain views, private views, and cumulative impacts on these views, and concludes that the view impacts as a result of the Proposal are reasonable and acceptable in accordance with accepted Planning Principles, the existing urban context, and the strategic future context of the site. The VIA concludes that:

“The Proposal is visually prominent from a wide range of views, however, it presents as an additional element within existing views and does not obstruct any existing important elements;

The environmental impacts of the Proposal with regard to visual impact, beyond those assessed for the existing approval and subsequent modifications, is considered to be limited; and

Based on a comprehensive assessment against all relevant standards and guidelines, the Proposal provides an appropriate response to its visual and physical context and it is considered that the overall visual impact of the Proposal on public and private views, including cumulative impacts, is acceptable’.

The conclusions of Architectus are supported by Richard Lamb who finds the overall assessment of impacts in relation to the public domain impacts is sound with a tendency to over-rate, rather than under-rate the extent of impacts in relation to public domain views. Assessment of private domain impacts are well considered and can be relied upon as competent and reasonable.

Accordingly, it is concluded that the visual impacts of the Proposal to the public and private domain views are acceptable.

9.4 OVERSHADOWING

The SEARs require this EAR to address and outline design principles incorporated into the development in terms of sunlight and overshadowing. In terms of overshadowing of residential dwellings and public spaces in the surrounding locality, regard has been had to:

- ◆ The properties that currently receive (or exceed) two hours of sunlight in mid-winter;
- ◆ The properties that currently receive between 0 and 2 hours in mid-winter; and
- ◆ The function of important public meeting spaces in the locality.

The tower, podium, and ribbon elements of the Proposal will result in overshadowing that has not previously been assessed. As summarised below and addressed in detail within the Architectural Design Statement at **Appendix C**, FJMT has undertaken a detailed shadow analysis in terms of the Proposal's impact on Pyrmont generally and Union Square and Pyrmont Bay Park specifically, as well as a daylight impact analysis on adjacent residential properties.

9.4.1 Overshadowing of Public Spaces

The architectural form of the tower and ribbon elements have been developed to ensure solar access to key public spaces is maximised. These public spaces have helped define the form, profile and height of the proposed tower, so that the architecture enhances and responds to these key public spaces and protects their ongoing significance to Pyrmont and the broader community, as discussed below:

- ◆ **Union Square:** Union Square marks the centre of Pyrmont, and is a precinct that supports a number of heritage items and is characterised by a mix of uses including public buildings, residential, and public space which is well used by the community. To minimise overshadowing impacts on this important public space, FJMT has undertaken detailed shadow studies at 15-minute intervals during mid-winter and prepared a 'heat map' analysis. This analysis has informed the design of the tower element.
- ◆ **Pyrmont Wide Shadow Analysis:** The shadow analysis has also considered other public spaces within Pyrmont,

including the Pyrmont Bridge gateway forecourt and the waterfront promenade/plaza to the east of Pyrmont Bay Park at the Maritime Museum.

The findings and conclusions of the analysis are that:

- ◆ As the tower is slender, the shadow is 'fast moving' and any shadow impacts to any particular area are limited in time.
- ◆ Union Square currently benefits from a high degree of direct solar access.
- ◆ The greatest impact on Union Square is recorded at 11 am on 21 June, when the mid-winter sun covers the majority of Union Square including the Pyrmont War Memorial. However, by 11.30 am, the shadow will have moved from the main body of Union Square and will fall on Union Street constructed roadway to the east.
- ◆ The 11 am shadow will have no impact on Union Square after 24 July. The shadow impacts to Union Square are limited to the period between 19 May and 24 July (i.e. 66 days per year), which equates to 18% of the year.
- ◆ Winter lunch time sun into Pyrmont Bay Park is of great importance to the amenity of this public park. No additional overshadowing of this public space will occur between 12:00 and 2:00 pm.
- ◆ At the September equinox, the solar analysis identified that the direct solar access to Pyrmont Bay Park between 9:00am and 3:00pm was reduced from 100% to 91%. This 9% reduction represents the largest solar impact to Pyrmont Bay Park on a single day, and even taken in isolation is considered to be a limited environmental impact.

9.4.2 Analysis of properties currently receiving two hours or more of sunlight in mid-winter

The location and design of the tower minimise shading on neighbouring residential and commercial properties and deliver a shadow that falls predominately within the site. Through a tapering tower form, with a reduced footprint to the lower levels, the tower design seeks to minimise impacts on neighbouring residential dwellings and share both views and access to winter sun.

FJMT's daylight impact analysis has been prepared based on sun access heat mapping of residential properties that are currently receiving more than two hours of sunlight between 9am and 3pm in mid-winter. The analysis then identifies properties which will be impacted by a reduction of solar access to below two hours as a result of the Proposal. The analysis has been prepared based on the worst-case time of the year (i.e. June 21), when the days are shortest and shadows longest. The analysis identified three instances where sun access to any part of apartment dwelling is reduced below two hours, none of which are living areas or balconies.

The findings and conclusions of the analysis are:

- ◆ In most instances, where sun access to adjacent residential buildings falls below two hours, this occurs on roofs, except for three instances where a small portion of a sun access to a building façade drops below two hours.
- ◆ **49-51 Mount Street, Pyrmont** - sun access to one of the street-facing second story windows will fall below two hours. It is likely this window is to a bedroom, and it is noted that the second street-facing window maintains two hours of sun access. This overshadowing will not affect living room or balcony sun access.
- ◆ **102 Miller Street, Pyrmont** - sun access to one bedroom window on the courtyard-facing facade on the 8th floor will fall below two hours, where it presently receives more than two hours. The balcony, living room and master bedroom window will continue to receive two hours sun access. An apartment plan is included on page 161 of the Architectural Design Statement which identifies the location of the bedroom window.
- ◆ **102 Miller Street, Pyrmont** - sun access to one window on the sandstone-bluff facade on the 4th floor will fall below 2 hours, where it presently receives more than 2 hours. The balcony, living room and master bedroom window will continue to receive two hours sun access.

9.4.3 Analysis of properties currently receiving less than two hours of sunlight in mid-winter

In response to objective 3B-2 of the ADG, FJMT has also undertaken solar access analysis to determine whether any residential properties presently receiving less than two hours of mid-winter solar access, have that sun access reduced further by 20% with the introduction of the Proposal.

The analysis identified:

- ◆ Those properties presently receiving less than two hours of mid-winter solar access affected by the proposed tower
- ◆ Any properties affected, whether living rooms or balconies are affected. Living rooms and balconies are recognised as the critical spaces for sun access to a property.
- ◆ For any living rooms and balconies affected, whether the solar access reduction exceeds 20% of sun presently received. E.g. for 60 minutes of solar access, a reduction of 12 minutes would be a 20% reduction.
- ◆ The solar mapping revealed three adjoining properties with dwellings presently receiving less than 2 hours of solar access on mid-winter, for further analysis.
- ◆ These properties together with the analysis findings are as follows:
- ◆ **102 Miller Street, Pyrmont** – Nil units at 102 Miller Street presently receiving less than 2 hours of mid-winter sun have that solar access reduced by 20%.
- ◆ **33-35 Union Street, Pyrmont:** no overshadowing, nil environmental impact from proposed tower.
- ◆ **1-27 Murray Street, Pyrmont** – Nil units at 1-27 Murray Street presently receiving less than 2 hours of mid-winter sun have that solar access reduced by 20%.

9.4.4 Conclusion

The architectural form of the tower, podium and Ribbon elements have been developed to ensure solar access to key public spaces is preserved to the maximum extent. The conclusions of the shadow analysis found that Union Square currently benefits from a high degree of direct solar access, and that the loss in direct solar access will be minimal. Over the period of a year the current average figure for direct solar access to Union Square between 9:00am and 3:00pm is 82.1%. The additional shadow from the proposed tower sees the annual figure reduced to 81.5%, a reduction of 0.6%. Given the Proposal will not overshadow Union Square during core lunch hours, and the limited time of the duration of shadow, the Proposal is expected to have only a minimal environmental impact in terms of overshadowing of public spaces.

The tapering of the lower tower form to the north assists with sun access to Pyrmont Bay Park between 2:00pm and 3:00pm in mid-winter. Over the period of a year the current average figure for direct solar access to Pyrmont Bay Park between 9:00am and 3:00pm is 100%. The shadow from the proposed tower and ribbon sees this annual figure reduced to 97.20%, a reduction of 2.8%, again a very limited environmental impact.

Similarly, for those properties currently experiencing 2 hours or more of sunlight in mid-winter, the daylight impact analysis confirms that no balconies, master bedrooms and living rooms of neighbouring residential units will be adversely impacted, and these areas will maintain 2 hours of sun access. Of the properties presently experiencing less than 2 hours of sunlight in mid-winter, nil units have that solar access reduced by 20%. Consequently, it is anticipated that the Proposal will have minimal environmental impacts in terms of daylight impacts on surrounding residential properties.

9.5 RESIDENTIAL AMENITY

The SEARs require the modification application to “*address and outline design principles incorporated into the development in terms of sunlight/overshadowing, natural ventilation, wind impacts, reflectivity, visual and acoustic privacy, and safety and security*” and “*demonstrate consistency with the requirements of SEPP 65 and the Apartment Design Guide*”.

FJMT has undertaken a comprehensive assessment of the residential components of the Proposal against the objectives of the Apartment Design Guide (ADG), provided at **Appendix C**. A SEPP 65 Compliance Statement has also been

provided at **Appendix C**, which confirms that the residential components of the Proposal tower have been designed to achieve the design quality principles set out within Schedule 1 of SEPP 65.

The following sections provide a summary assessment of the Proposal against the relevant residential amenity criteria under the provisions of the ADG, which outlines objectives for the amenity of residential apartments.

All apartments will have a very high standard of internal residential amenity. All apartments will have adequate access to sunlight, be well ventilated, have access to high quality communal open space and private open space as well as panoramic views of Sydney Harbour, Pyrmont and the City.

9.5.1 Communal and Public Open Space

Objective 3D-1 of the ADG recommends 25% of the site be available as communal open space and that a minimum of 50% of the space receive direct sunlight to the principle usable part of the communal open space for a minimum of 2-hours between 9am and 3pm mid-winter.

A generous area of communal open space area has been located on Level 07, with access to sunlight and view north into the Pyrmont locality. Access to the terrace will be restricted to residents only via a dedicated lobby space on level 8 overlooking the pool deck. The communal opens space includes a swimming pool, pool deck, change facilities, exercise facilities and generous landscaped areas to accommodate a broad range of uses. The communal open space has an area of 1103m², which equates to over 40% of the tower-related site area of 2306m².

The area is highly accessible to residents and has a high level of amenity with a variety of uses, aligned with the overall Proposal.

9.5.2 Visual Privacy

Objective 3F-1 of the ADG recommends a building separation of 24m between habitable rooms and balconies for buildings over 25m in height, in order to achieve reasonable levels of external and internal visual privacy. Separation distances between buildings on the same site should combine required building separations depending on the type of room.

All building separation distances comply with Objective 3F-1, as the tapering at the base of the tower form results in increased building separation from neighbouring residential and commercial building sites, most notably to the north and west are in excess of 30m.

The façade system towards the base of the tower includes increased spandrel heights and projecting horizontal louvres for privacy and special event light management. The internal façade skin will also feature a fabric black-out curtain for further privacy, providing a dynamic and high-performance residential façade.

9.5.3 Private Open Space and Balconies

Objective 4E-1 of the ADG recommends apartments provide appropriately sized private open space and balconies to enhance the residential amenity. To ensure a high level of amenity, a majority of the apartments are provided private open space in the form of 'winter gardens' in lieu of open balconies. The 'winter gardens' are located adjacent to the living area to maximise sunlight and view.

Where 'winter gardens' are not practical due to noise or wind, Juliet balconies are proposed. No more than 10% of all apartments will have Juliet balconies. All private open space is or exceeds the minimum recommendation outlined in the ADG, providing enhanced residential amenity on-site for future occupants to enjoy.

9.5.4 Natural Ventilation

The apartment within the tower will achieve the ADG requirement of 60% natural ventilation, and ensure good ventilation to as many apartments as possible. The oval floor plate geometry will assist making the wind pressures around the tower uniform and promoting good ventilation.

The design will ensure that all apartments have operable windows with open areas that comply with the ADG requirements. All winter gardens will have sliding/folding doors opening into the living spaces to maximise ventilation.

Further, 70% of apartments within the first nine stories of the building will be naturally cross ventilated, this exceeds the 60% requirements of the ADG.

9.5.5 Daylight Access

The proposed tower design will optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space in compliance with the ADG requirements. 70% of the apartments will achieve 2 hours of sunlight on the 21st of June between 9 am and 3 pm.

9.5.6 Apartment Mix & Layout

The proposed tower includes a range of apartment types ranging from 1 bed room to 3 bedrooms plus study and will exceed minimum internal area recommendation. The proposed mix reflects 39.7% 1B, 51% 2B and 9.3% 3B. The mix is distributed across the floors with premium and larger apartments typically on higher floors and oriented to primary views. The apartment layouts are designed to accommodate a variety of activities and needs, all apartments comply with the minimum ADG bedroom sizes and living room widths as per Objective 4D-3. In some instances, living room widths have been designed on an angle, in order to maximise the use of the space, increase sunlight access and take advantage of the views.

9.5.7 Storage

The proposed tower design provides storage in the basement and in each residential apartment, in accordance with the nominated requirements listed under Objectives 4G-1 of the ADG. An Apartment Storage Schedule has been provided by FJMT in **Appendix C**.

9.5.8 Floor to Ceiling Heights

Objective 4C-1 of the ADG recommends that all habitable rooms have a ceiling height of 2.7m; all habitable rooms, except for 20% of kitchens that will have a height of 2.4m, will achieve the recommended height. All non-habitable rooms will achieve a minimum ceiling height of 2.4m.

9.5.9 Acoustics

To ensure residential amenity within the proposed tower, the Noise Impact Assessment by WSP (**Appendix K**) has assessed the noise ingress to the proposed residential apartments and hotel rooms taking into account The Star's noise sources as well as noise from external sources. WSP concludes that the internal amenity criteria as set out by the Sydney DCP 2012 can be met internally through use of appropriately selected glazing and attenuated natural ventilation paths.

WSP has provided preliminary specifications for glazing to control the worst-case façade noise level in their Noise Impact Assessment report.

The attenuated natural ventilation paths are proposed to be achieved through a combination of ducted façade louvres and trickle vents in the spandrel which will include appropriate acoustic treatment as detailed in the Mechanical Services report at **Appendix KK**.

The apartments on the lower levels of the tower have been designed to permit a high degree of occupant environmental flexibility and amenity through the provision of Juliet and wintergarden balconies with 100% sealable and acoustic façades.

WSP also recommends the preparation of an Operational Noise Management Plan (ONMP) and notes that the noise management measures introduced to ensure compliance for external receivers will also benefit the onsite residential and hotel receivers.

9.5.10 Odour

With reference to residential uses, an air quality assessment (**Appendix EE**) has been undertaken which considered air quality impacts from the surrounding environment and operation of the site. The Air Quality Report notes the following with regard to the residential tower:

- ◆ Local road traffic is the dominant road type in the area surrounding the site. The nearest significant road is the Western Distributor, more than 500 metres from this new residential use. With regard to air quality, the emissions from the surrounding road traffic are therefore considered to be a low risk.
- ◆ Air emissions from the commercial exhaust ventilation system and the basement carpark exhaust will be designed in accordance the relevant Australian Standard. With regard to air quality, these emissions are therefore considered to be a low risk.
- ◆ Emergency diesel generators stacks are located at a distance greater than 50 metres from the residential tower. If the described management practices are implemented, with regard to air quality, emissions from this source are therefore considered to be a low risk.

The assessment therefore concluded that the air quality impacts upon the residential tower are considered a low risk.

9.5.11 Separation of Uses

The Proposal has been designed to ensure clear separation between the existing casino operations and the proposed residential, hotel and neighbourhood centre uses on the site, as explained below:

- ◆ **Pedestrian circulation and access arrangements:** separate pedestrian entries have been provided for hotel guests, residents within the tower, and visitors to the neighbourhood centre.

Hotel guests will access through the hotel lobby fronting Pirrama Road on Level B2. The Level B2 lobby will provide direct access via lifts to the Sky Lobby located at Level 39 and Mezzanine Level 40.

Residents of the tower have a separate dedicated residential lobby on Level 00 fronting Jones Bay Road. The residential lobby will have a concierge service, an adjacent mail room, and will provide direct access via lifts to the residential levels from Level 06 to Level 38, and to residential recreational facilities on Level 07.

Consistent with nearby apartment buildings in Pyrmont, the base of the residential tower appears contiguous with adjacent development to maximise valuable street frontage and preserve street front activity the proposed activation adjacent to the residential lobby will contribute to and reinforce the residential and neighbourly setting, with a small café to the west and the neighbourhood centre to the east.

Residents will also have dedicated access from the car stacker to the residential lobby via lifts and a passageway.

The Neighbourhood Centre will also have a separate and clearly defined presence as well as address, with access provided from Jones Bay Road to the east of the residential lobby.

There are no internal pedestrian connections to the Star facilities from the residential portion of the tower. The proposed tower and podium component of the development will operate as a separate building from a resident's perspective.

The residential communal facilities on Level 7 are only accessible from residential-only floors within the tower and are screened from, and separate to, The Star facilities.

Vehicle circulation and parking: The car stacker facility will be solely for use by the hotel and apartment uses within the tower, and separate from the primary Star car park. A shared carpark is not uncommon for city-based residential development and the automated car stacker removes any of the inconveniences typically experienced by shared parking facilities.

A Car Stacker Management Plan has been prepared and is provided at **Appendix VV**. Car stacker access will be available only through security fobs, ensuring there is no conflict of uses or unauthorised access to the facility.

Easements in gross and sales contracts: It is proposed that easements in gross burdening each residential lot will be created to provide for easements for noise, vibration and electrolysis. It is also proposed that the sales

contracts to apartment purchasers would include an acknowledgement of the context of the physical and operational environment of the Star precinct, and the interface between the residences and the Star complex. Together, the easements in gross on the title and the acknowledgment in the sales contracts would ensure that the purchasers understand and expressly agree that they would be buying into an entertainment-gaming precinct with its unique operational characteristics. This obligation for disclosure and acknowledgement would be required to be passed on to purchasers of resales into the future.

Umbrella Agreement: It is proposed that an Umbrella Agreement will be entered into between The Star and the owner's corporation to ensure that the Residential Strata Management Plan and Residential by laws provide appropriate details of the interrelationship between the Star complex and the owner's corporation; and to implement the operational management plans that govern the various aspects like acoustics, security, people movement, vehicular movement, special events etc.

9.5.12 Conclusion

The Proposal has been designed to ensure compliance with the provisions of SEPP 65 and the ADG as demonstrated in the Architectural Design Statement at **Appendix C**. It is anticipated that the Proposal will deliver high quality and positive residential amenity for the future residents of the development. Overall, the tower element balances the needs of future occupants, whilst limiting potential external environmental impacts.

9.6 MATERIALS, FACADES AND FINISHES

9.6.1 Materials and Finishes

The Proposal includes a variety of materials and finishes that have been selected through careful consideration of the history of Pyrmont and the urban context of the site. The key façade elements include:

- ◆ **White organic sculptural forms of glass and louvres** – This pair of gently adjusting tower-forms will appear like a white and uniform series of layers articulated at each floor with a sandstone-like recessed edge or strata. The external low-iron sheet of glass of the facade system will provide clear vision to the layer of white automated sheer curtains that will give a veil-like delicacy to the sculptural surface.
- ◆ **Green Seam** – Natural landscaped bio-filtration gardens form a series of 'green-belts', clearly articulate in the architecture and acting as 'lungs' through which the building breaths, naturally filtering the air.
- ◆ **Neighbourhood Centre** – The gentle curved facade of the neighbourhood building matches the height of the adjacent sandstone escarpment, and is clearly independent and articulated as a welcoming public building. A double-skin facade encapsulating operable timber louvres, create a warm and inviting community architecture.
- ◆ **Podium Forms** – The material of the ground-plane, street-frontage built forms, pavilions and tower podiums is to be Sydney Sandstone, detailed and rendered with depth and solidity. Deep louvre screens in sandstone and finely profiled precast provide a balance of transparency and solidity, shade and view, while the curvilinear lifting of the stone opens large areas of transparent glazing to activate streets and squares.

The choice of materials and finishes will provide visual interest to the tower and ribbon elements of the proposed development while ensuring Proposal fits within its urban context.

9.6.2 Façade Design

As noted in the Façade Report prepared by TTW provided at **Appendix MM**, the tower and podium elements have been designed with facades that respond to the environment and context of the site, and will limit environmental impacts such as solar heat and glare on the surrounding area.

The proposed façade design has a collection of podium and tower façade elements that integrate residential apartments, hotel accommodation, entertainment and recreational facilities. The façades have been designed to accommodate these different uses within the tower, while ensuring the external appearance is seamless. The proposed glazing has also been benchmarked against existing glazing and has found to be a similar or lower reflectivity to what is already installed at The

Star. The hotel levels feature sealed facades to maintain the tight thermal comfort ranges and the use of air conditioning typical of these uses. By contrast, the residential facades have been designed to incorporate a regulated percentage of operable area providing fresh air and consequently a lower reliance on air conditioning. Creating a cohesion between these elements is paramount to the design's singular aesthetic. The western façade of the tower will feature a 'green seam', as shown in **Figure 59** below, which gradually reveals the tower core travelling up the built form. This green seam will offer high amenity to the lift lobbies, providing natural light and views into the common circulation spaces.

From a façade perspective, a major environmental impact of the constructed building comes from the potential impact of specular reflected light (glare) on surrounding areas. The glare impact on vehicles (cars and the light rail) have been reviewed in the CPP solar reflectivity assessment contained at **Appendix GG**. This assessment provided a maximum acceptable level of glare which the proposed glazing options can meet. TTW measured the glare of the existing glass on the building and found it to be comparable or higher than the proposed glazing. Based upon the above, the proposed glazing options both minimise the potential environmental impact of glare on the surrounding areas.



Figure 59 – 'Green Seam' Core Facade

9.6.3 Façade Maintenance

To ensure the façades are maintained to a high standard, a Building Maintenance Unit (BMU) will be installed within the tower roof. Façade access for cleaning and maintenance will be from a pair of roof BMUs, located in each tower form. The taller north form will be serviced by a central BMU with a telescopic arm unit. The southern form will be serviced via a smaller, perimeter track based unit. Both BMUs will have discrete garage enclosures disguised within the detail of the building.

Outward sloping façades use a BMU pull in strategy. Pull in restraint clips are temporally plugged into the mullions. These are used to draw the BMU cradle into the façade. For the larger offsets of 500mm or so these restraint clips will be permanently installed to accommodate the load. The BMU will be fitted with lanyards and rollers to keep the hangers free of the façade. Inwards sloping façades will use a soft rope restraint system with auto spooling that is clipped into temporary restraint plugs. The telescopic arm automatically manoeuvres the cradle in position while the restraint ropes help hold the position.

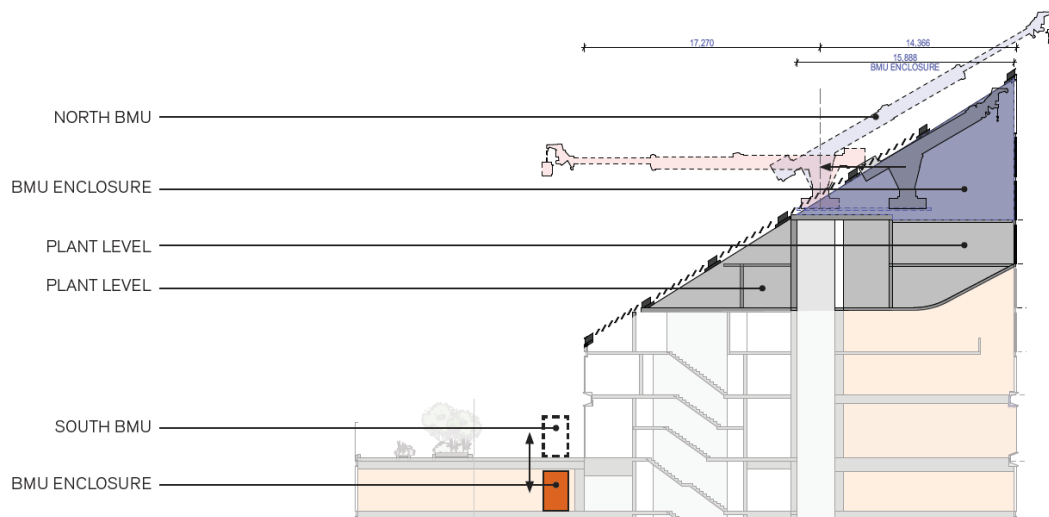


Figure 60 – Proposed Building Maintenance Unit

9.6.4 Conclusion

The proposed façades will add elements of interest to the streetscape, while improving site lines and permeability through the use of subtle layered glazing. Sandstone has been incorporated into the podium of the tower to complement the existing materials palette of the site and surrounds and to acknowledge the sandstone environment of Pyrmont. The proposed façades have been carefully selected and designed to respect the urban context and history of the Pyrmont Peninsula, and are expected to enhance the streetscape adjacent to the site. The proposed façades will respond to local environmental conditions, including wind, water, solar heat and glare, resulting in a design which controls the requirements for heating and cooling in a responsible and compliant manner. The glazing has been benchmarked against existing glazing and has found to be a similar or lower reflectivity to what is already installed onsite.

The BMUs have been designed to enable the facades to be maintained to a high standard of upkeep. It is anticipated that ongoing discussions with the BMU consultant will ensure that the most effective BMU system is installed.

9.7 STREETSCAPE AND PUBLIC DOMAIN

9.7.1 Streetscape

The Proposal will result in a substantial revitalisation of the streetscape and public domain surrounding the site, including the reactivation of the following entry points:

- ◆ Corner of Pyrmont and Union Street;
- ◆ Corner of Edward and Union Street;
- ◆ Pyrmont Street Car Park Entry;
- ◆ SELS Building Forecourt;
- ◆ Restaurant Street; and
- ◆ Level B2 Light Rail.

These works are documented in detail within the Architectural Design Statement at **Appendix C**.

Other works that will improve and activate the streetscape include the Neighbourhood Centre, the Ritz-Carlton hotel lobby, the residential lobby, and F&B premises along Jones Bay and Pirrama Road. These areas have been designed to improve sightlines and passive surveillance, while providing weather protection and good amenity as shown in **Figure 61** below.



Figure 61 – Streetscape along Pirrama Road and Jones Bay Road

The tower steps back from the site boundary at the north, both to introduce a local street scale but additionally to mitigate potential down drafts. The Neighbourhood Centre will increase street activation at the corner of Pirrama Road and Jones Bay Road. Further, the Pirrama Road frontage of The Star will be opened up at street level to increase transparency and activation, thus encouraging greater use of the light rail. The finishes to this area will be upgraded to create a more pedestrian friendly experience and streetscape.

Pirrama Road will be improved through provision of weather protection awnings and landscaping as detailed in the Architectural Plans at **Appendix B**, Architectural Design Statement at **Appendix C** and the Landscape Plans at **Appendix D**.

9.7.2 Public Domain

The proposed works under Mod 13 will have a positive impact on the public domain and streetscape surrounding the site through the following works:

- ◆ **Pirrama Road Arrival/Light Rail Entry:** It is proposed to remove parts of the existing wall and the existing loading dock to improve pedestrian access and wayfinding into The Star and the light rail stop. Upgrades to the paving inside the property boundary will be extended across this frontage, and the existing asphalt footpath is proposed to be upgraded to a higher quality granite or concrete flagstone paver. This will provide greater visual connectivity from the public domain to the existing light rail stop within.
- ◆ **Pirrama Road & Jones Bay Road:** The Ritz-Carlton porte-cochere on Pirrama Road will be enhanced with replacement street trees and gardens on the boundary. The Jones Bay Road upgrades include retained street trees,

and upgraded paving finishes up to the extent of the existing loading dock entrance.

- ◆ **Jones Bay Road:** The Proposal identifies the Jones Bay Road frontage as the Public and Community focused portion of the site. Jones Bay Road accommodates the residential entry, the Neighbourhood Centre entry and an improved F&B edge that ties to the ongoing redevelopment of The Star. The upgrades to Jones Bay Road has the opportunity to engage with the local pedestrian network, which leads to the upper escarpment and Giba Park beyond.
- ◆ **SELS Plaza:** Works to the SELS plaza on the corner of Pymont Street and Jones Bay Road will respond to the heritage significance of the SELS building.
- ◆ **Pymont Street Driveway Entry:** This street entry will be paved with granite flagstone pavers to match existing driveway crossover materials around the site.
- ◆ **Podium Landscapes:** Several other landscaping works are proposed as described in **Section 4**, the Landscape Plans at **Appendix D**, and the Landscape Design Report at **Appendix E**.

9.7.3 Conclusion

Public domain and access improvements will significantly improve The Star's interface with the public domain. The proposed public domain enhancement works will improve the interface of the site with the surrounding streets and create a more pedestrian friendly environment, improving pedestrian safety and amenity. The public domain works and ground level retail spaces will enable passive surveillance, and activate previously blank walls at the boundaries of the site, resulting in a positive environmental impact. These proposed works will create an activated, connected and permeable ground plane, which invites users to interact with The Star and the Pymont precinct. The proposed public domain and access improvements will have a significant positive impact on Pymont; building upon the improvements approved under Mod 14.

Overall it is considered that the proposed redevelopment of The Star as proposed under Mod 13 will enhance the provision of a safe and secure environment. It is considered that the Proposal will provide strong ownership cues, particularly for the local community, and increase vibrancy and territorial reinforcement.

9.8 SIGNAGE

The proposed signage works are shown in detail on the Architectural Plans provided at **Appendix B**. The plans provide details of the proposed business identification signage and branding on the tower, business identification signage for F&B tenancies on the site, and as well as vehicular way-finding signage relating to the car parking entries. The business and tenancy identification signage is required, due to the diversity of uses. It is critical that tenancies are suitably signposted to enable easy navigation for patrons.

SEPP 64 aims to ensure that signage is compatible with the desired amenity and visual character of an area, communicates the message effectively and is of high quality design and finish.

Part 3 of SEPP 64 does not apply to the proposed signs as they are defined as 'business identification signs'. However, in accordance with Part 2 of the SEPP an assessment of the signage works against the criteria specified in Schedule 1 of SEPP 64 has been undertaken and presented in **Table 22**.

Table 22 – SEPP 64 Assessment

Clause	Comment/Compliance
1 Character of the area <ul style="list-style-type: none"> ◆ Is the Proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located? ◆ Is the Proposal consistent with a particular theme for outdoor advertising in the area or locality? 	<p>The site is unique, comprising of a large irregular street block. Due to the numerous street frontages and business uses located in The Star, the proposed signs are required for multiple purposes including pedestrian wayfinding, vehicle and public transport wayfinding, business identification and tenancy identification.</p> <p>The proposed signage respects the character of the area and adjacent residential properties, and will improve wayfinding</p>

Clause	Comment/Compliance
	<p>through the site and delineate the different uses within the site itself.</p> <p>The proposed signage will not detract from the heritage value of the SELS Building, as the signage strategy has aimed to minimise signage near the Jones Bay Road and Pyrmont Street intersection, as this interface also fronts residential properties.</p> <p>Adjoining development, in particular around Darling Harbour, have adopted similar scale signage including proportionate flush wall signage on commercial, retail and hotel developments to advertise the use of the buildings.</p> <p>It is considered that the proposed signage is compatible with the current and ongoing use and development of the site as an 'integrated resort'.</p>
2 Special areas <ul style="list-style-type: none"> Does the Proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas? 	<p>The proposed signage has been assessed as part of the Heritage Impact Statement (HIS) at Appendix P.</p> <p>The HIS concludes that the proposed signage strategy is modest and in keeping with the existing character of The Star. It states that the proposed signage is not considered to have any impact on the surrounding heritage listed items, with no new signage proposed in the vicinity of the SELS building.</p> <p>In addition, the signs are integrated with the building design of the existing site and proposed new development components, and the proposed signs do not extend beyond the approved building scale.</p> <p>Given the above, it is considered that the proposed signage does not detract from the amenity or visual quality of sensitive areas or heritage listed items in the surrounding area. In particular, the proposed signage will not detract from the heritage value of the SELS Buildings.</p>
3 Views and vistas <ul style="list-style-type: none"> Does the Proposal obscure or compromise important views? Does the Proposal dominate the skyline and reduce the quality of vistas? Does the Proposal respect the viewing rights of other advertisers? 	<p>The proposed signage does not result in additional bulk or scale as the signs will be integrated into the proposed building design and existing built form. The proposed signs are generally flush, with an average depth of 300mm. The signage will not restrict significant views and signs will not dominate the skyline or reduce the quality of vistas.</p> <p>All of the proposed signs are integrated into the building design (existing and proposed works) and will therefore not impact the viewing rights of other advertisers.</p>
4 Streetscape, setting or landscape <ul style="list-style-type: none"> Is the scale, proportion and form of the Proposal appropriate for the streetscape, setting or landscape? Does the Proposal contribute to the visual interest of the streetscape, setting or landscape? Does the Proposal reduce clutter by rationalising and simplifying existing advertising? Does the Proposal screen unsightliness? Does the Proposal protrude above buildings, structures or tree canopies in the area or locality? 	<p>The proposed signs have been designed to respect the scale and proportion of the existing site and proposed works, with the three larger Star and Ritz-Carlton logo signs limited to the upper levels of the podium and the tower form, and signage at the street frontages limited to smaller scale signs in keeping with the streetscape and façade treatment.</p> <p>The proposed signage clearly articulates to visitors and persons passing the site the key functioning of the site - each sign has a purpose including, tenancy identification and directional signage for carparking and pedestrian wayfinding.</p> <p>The signs have simplified content to minimise the potential for visual clutter.</p>

Clause	Comment/Compliance
<p>◆ Does the Proposal require ongoing vegetation management?</p>	<p>All signage will be constructed out of high quality material to ensure a long lifespan and to ensure the materials do not weather, causing an undesirable materiality.</p> <p>The proposed signs have been designed to ensure they do not dominate the façade treatments, and are sufficiently spaced to reduce clutter. The signs do not screen unsightliness, the purpose is for business identification and wayfinding.</p> <p>The proposed signs do not protrude above buildings, structure or interfere with tree canopies as they are all wall mounted signs, generally flush to the façade.</p> <p>In conclusion, the proposed signage is aligned with the expectations of a commercial site that is utilised for numerous purposes in Pyrmont, close to Darling Harbour and the Sydney CBD, and is therefore appropriate to the site's context.</p>
<p>5 Site and building</p> <p>◆ Is the Proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?</p> <p>◆ Does the Proposal respect important features of the site or building, or both?</p> <p>◆ Does the Proposal show innovation and imagination in its relationship to the site or building, or both?</p>	<p>As noted above, the proposed signs have been designed to respect the scale and proportion of the existing site and proposed development.</p> <p>The proposed signs are of a high architectural quality and will integrate with the existing and proposed built forms including the tower element.</p> <p>The tower signage zones have been scaled to ensure they are proportionate with the built form context and complement the tower size and located to avoid obstructing sensitive vision panel areas.</p>
<p>6 Associated devices and logos with advertisements and advertising structures</p> <p>◆ Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?</p>	<p>The proposed advertisements are to be integrated with the proposed development and existing site. Lighting associated with the signage will not affect vehicle or pedestrian safety. All serviceable items of the proposed installation will be accessible for maintenance purposes, however, generally inaccessible to the public.</p> <p>The signage has been designed to be of a high-quality finish consistent with the overall building.</p>
<p>7 Illumination</p> <p>◆ Would illumination result in unacceptable glare?</p> <p>◆ Would illumination affect safety for pedestrians, vehicles or aircraft?</p> <p>◆ Would illumination detract from the amenity of any residence or other form of accommodation?</p> <p>◆ Can the intensity of the illumination be adjusted, if necessary?</p> <p>◆ Is the illumination subject to a curfew?</p>	<p>The majority of the signage will be internally illuminated and fixed to non-illuminated backgrounds. The illumination will occur at a low wattage deemed to not generate unacceptable impacts to motorists, aircrafts, pedestrians or adjacent residential properties. In addition, the signage is setback from the street.</p>
<p>8 Safety</p> <p>◆ Would the Proposal reduce the safety for any public road?</p> <p>◆ Would the Proposal reduce the safety for pedestrians or bicyclists?</p> <p>◆ Would the Proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas</p>	<p>The installation and operation of the proposed signs will not reduce safety of adjoining roads as they are situated within the boundary of the subject site, and will not project into the road reserve.</p> <p>As such it is considered that the proposed signage does not reduce the safety for pedestrians, particularly children and bicyclists.</p>

9.8.1 Conclusion

The proposed signage has been assessed against the relevant provisions of SEPP 64 and it is considered that they are generally consistent with the criteria specified in Schedule 1. The proposed signage is appropriate for the site and will:

- ◆ Improve wayfinding on-site and around Pyrmont;
- ◆ Respond to the need for signage relating to the proposed uses; including future tenancies, restaurants, the Neighbourhood Centre, Pyrmont Street car park entry and existing underutilised pedestrian entry points;
- ◆ Be sympathetic to the proposed built form and façades and will lend visual interest to the streetscape;
- ◆ Primarily be located at ground level along long street façades, thereby limiting the amount of signage within the skyline and visible from Sydney CBD and surrounds; and
- ◆ Be proportionally sympathetic and all signage will not be visible at once due to the separation and frontages.

Overall, the proposed signage is considered appropriate for the development, given the urban context, numerous uses on site, size of the site, and scale of the development. It is considered unlikely that the proposed signs will result in any adverse environmental impacts in the context of the Major Project MP08_0098 as approved and constructed and now proposed.

9.9 REFLECTIVITY

The SEARs require reflectivity to be addressed as an amenity consideration. The Proposal has the potential to result in reflectivity impacts that have not previously been assessed. Accordingly, a Solar Reflectivity Assessment has been prepared by CPP to assess the reflectivity of the Proposal and is provided at **Appendix GG**.

CPP's assessment refers to section 3.2.7 of the Sydney DCP 2012, which states that '*generally, light reflectivity from building materials used on facades must not exceed 20%*'. Therefore, the methodology in the report assumes a 20% reflectivity coefficient for the proposed glazing to undertake the assessment.

As noted in the report, Threshold Increment (TI) is the percentage by which the contrast must be increased relative to the background to make the object just visible due to the addition of glare. TI is a parameter used in the design of Road Lighting (e.g. AS/NZS 1158.1.1:2005) where a maximum TI value of 20% is used for all roadway lighting categories. Based on this, CPP's assessment has adopted a TI of 20% as the acceptability criterion for assessing levels of solar glare impact on passing traffic.

The Proposal has been assessed for adverse solar reflectivity and glare impacts at the following locations within the surrounding public road network:

- ◆ Eastern Façade, North Section – Darling Island Road.
- ◆ Eastern Façade, North Section – Pirrama Road.
- ◆ Eastern Façade, South Section – Pirrama Road.
- ◆ Western Façade, North Section – Jones Bay Road.
- ◆ Western Façade, North Section – John Street.
- ◆ Western Façade, South Section – Jones Bay Road.
- ◆ Western Façade, South Section – John Street.
- ◆ Virtual Northern Façade – Darling Island Road.
- ◆ Virtual Northern Façade – Pirrama Road.
- ◆ Virtual Southern Façade – Jones Bay Road and John Street.
- ◆ Western Distributor Freeway/Anzac Bridge.

CPP's assessment considered the Proposal's northern and southern facades as virtual vertical glazing in order to provide a conservative assessment of the solar glare impacts associated with these façades. The assessment found that for the most part, the proposed development does not cause adverse solar reflectivity glare on to the adjacent roads. However considerable solar glare impacts were found to emanate from the northern and western facades of the proposed podium in Darling Island Road and John Street, with TI values of 52% and 24% respectively. CPP recommended reflectivity coefficients for the external glazing over the podium facades to minimise adverse reflectivity and glare impacts on motorists using the adjacent roadways.

9.9.1 Mitigation Measures

CPP provides the following recommendations to minimise disability glare onto motor vehicles travelling towards the development along the adjacent public roadways:

- ◆ The external glazing over the northern and western podium façade (where solar glare impacts were found) to have a reflectivity coefficient of 12-15%, and
- ◆ The external glazing over the remaining tower facades will have a reflectivity coefficient of 10%.

The report notes that certain building materials other than glass, including metallic framing and supports, produce diffuse components of reflection and have potential to produce discomfort glare. To avoid discomfort glare, CPP recommends that all non-glazed surfaces utilise low lustre, textured finishes with a reflectivity coefficient of less than 20%.

To minimise potential for nuisance solar glare impacts, CPP recommends that external glazing proposed on any other curved façade elements within the Proposal should have a reflectivity coefficient of 10%.

9.9.2 Conclusion

The Proposal has been designed to address the recommendations of the Solar Reflectivity Assessment, as noted in TTW's Façade Report at **Appendix MM** and the Architectural Design Statement at **Appendix C**. Recommended reflectivity coefficients of 12-15% on the northern and western facades of the proposed podium have been incorporated into the plans prepared by FJMT and TTW.

The reflectivity of the tower and podium has been considered with the resulting material selections made to predictably reduce reflectivity below local requirements. The proposed glazing has been benchmarked against existing glazing and has been found to have a similar or lower reflectivity to what is already installed. The Proposal will not result in any adverse reflectivity or glare impacts on the adjacent roads, as a consequence of the use of low reflectivity glazing and finishes will be in accordance with the recommendations of the Solar Reflectivity Assessment.

It is expected that the balance of the proposed development, including Level 05 terrace and Darling Corner, as currently configured will not produce significant disability glare onto motor vehicles travelling toward the development along the adjacent public roadways, provided the recommended reflectivity coefficients contained in the CPP report are adopted for the specified areas of the facades.

FJMT and TTW are in agreement with the recommendations in this report, and have adopted the recommendations in the building design.

Given the above, the proposed Mod 13 works will have limited environmental impacts in terms of reflectivity on the surrounding roadways, and will comply with SEARs and Sydney DCP 2012 reflectivity requirements.

9.10 WIND IMPACTS

CPP has been engaged since the design excellence phase of Mod 13 to provide input into the design of the Proposal and ensure pedestrian wind comfort can be achieved at ground level and the upper terrace levels.

The SEARs require wind impacts to be addressed as an amenity consideration. The Proposal has the potential to result in wind impacts that have not previously been assessed. Accordingly, a Pedestrian Wind Environment Assessment has been prepared by CPP and is provided at **Appendix FF**. The Assessment provides details on the wind tunnel

investigation that has been conducted by CPP to measure the pedestrian level wind environment in and around the proposed Mod 13 development.

In early 2017, CPP reviewed an earlier revision of the Mod 13 scheme, and provided several mitigation measures to ensure pedestrian wind comfort. CPP's recommendations have been incorporated by FJMT into the current scheme for Mod 13 provided at **Appendix B**. This process has been described in greater detail in the Pedestrian Wind Environment Assessment at **Appendix FF**.

FJMT and CPP have worked collaboratively to ensure no adverse wind impacts arise from Mod 13, and the Pedestrian Wind Environment Assessment makes the following conclusions in relation to the current Mod 13 scheme:

- ◆ At ground level, all investigated locations passed the distress criterion and will be suitable for the proposed transient pedestrian space;
- ◆ Architectural details such as parapets, planter boxes, screening and awnings have been considered on the Level 07 Ribbon and Level 59 Club Lounge terrace to minimise the wind effect on the outdoor terraces. These outdoor spaces are suitable for the intended passive and recreational use;
- ◆ The passageway in between the two enclosed F&B tenancies on the Level 05 Sky Terrace will be suitable for use as a transient space. The implementation of the eastern balustrade has improved the wind conditions, landscaping has also been allocated on the Level 05 Sky Terrace to introduce pockets of calm and further improve wind conditions;
- ◆ The ribbon/shell structure semi-enclosing the Level 07 Ribbon is expected to limit cross-flow through the terrace and help reduce wind conditions to an expected pedestrian standing comfort rating and pass the distress criterion.
- ◆ Roof-overs, vertical screening, landscaping and balustrades have been implemented on the Level 07 Residential Terraces to help combat windy conditions. The poolside area directly shielded by the roof-overs in combination with the solid, vertical screens would be expected to experience wind conditions to levels suitable for pedestrian standing style activities.
- ◆ A 2.5m balustrade is proposed for the Level 59 Club Lounge Terrace, this is expected to provide calmer areas adjacent to the balustrade and is suitable for pedestrian standing or siting style activities.
- ◆ The remaining balance of the Mod 13 developments to the existing site, including awnings and signages, is expected to have limited environmental impacts to the existing wind amenity along the adjacent footpaths and roadways at ground level. The additional awnings at the corners of Edward, Union and Pyrmont Streets would be slightly beneficial for the wind conditions in the area directly underneath awnings as they would provide some shielding from wind and wind-driven rain.

9.10.1 Mitigation Measures

The Pedestrian Wind Environment Assessment (**Appendix FF**) provides mitigation measures to make areas suitable for the intended purposes associated with Mod 13:

- ◆ Care should be taken over pedestrian openings to the F&B venues located on the Level 05 Sky Terrace to avoid internal flow issues across the F&B volumes.
- ◆ Wind conditions were not measured in the open areas of the Event Terrace to the south of the Level 05 Sky Terrace, but would be expected to be similar to conditions on the existing Level 3 Terrace. In these open areas, the best solution is to appreciate that it will be windy, and local treatment such as vertical screens, cabanas, or landscaping to provide appropriately sized and localised calmer areas could be implemented to suit the style of future organised events. These can be mobile and should be oriented in different directions to ensure some calmer areas are available for all occasions.
- ◆ Considering the size of the open area within the Level 07 Ribbon/shell structure, there will be flow circulating within the large volume, and reducing the size of the eastern openings would further improve wind conditions in this space. An edge balustrade would create local calm areas close to the balustrade for some wind directions, and should be as high as possible to increase the size of the calm areas and help prevent waves in the pools.
- ◆ The BBQ area of the Level 07 Residential Terrace would benefit from a porous vertical screen to help mitigate

pressure-driven horizontal flow through the space. Dense, tall landscaping could also be used. It is also recommended to extend the solid roof-over in combination with the vertical screening as shown in **Figure 62** to further discourage wind flow through the BBQ area and eastern walkway.

- ◆ Level 59 Club Lounge Terrace has a 2.5m high balustrade bordering the outdoor terrace. It would be recommended that areas away from the balustrades and near the tower utilise local mitigation measures such as vertical screening, cabanas or dense, robust landscaping to help create smaller, calm areas for the intended passive use. A good example would be the poolside 'booth', with a solid or slightly porous roof in combination with solid walls, proposed for the Level 07 Residential Terrace.

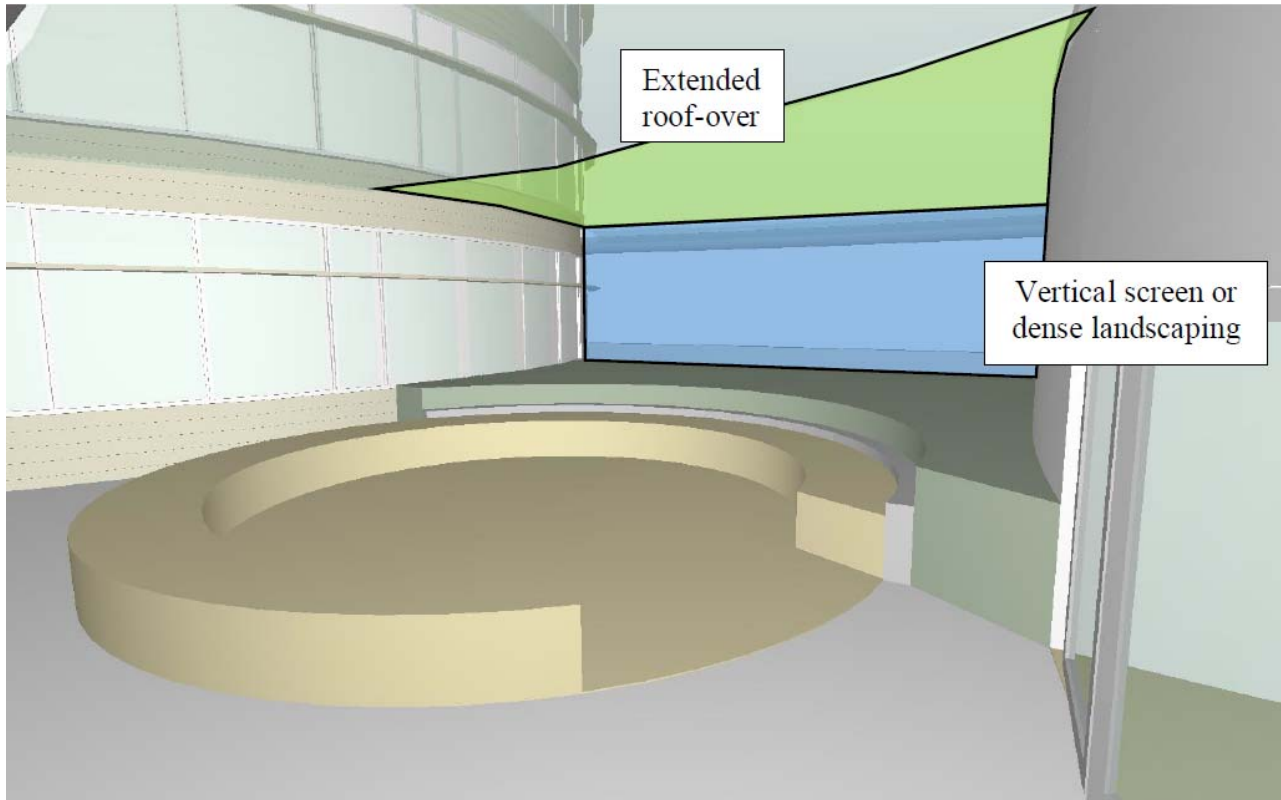


Figure 62 – Recommended mitigation for the BBQ area.

9.10.2 Conclusion

The Pedestrian Wind Environment Assessment concludes that adopting the amelioration recommendations in the report would deem all areas of the Proposal suitable for their intended purposes. FJMT and DWP have worked with CPP to incorporate these amelioration recommendations within the Proposal to ensure user and pedestrian comfort is maximised. The proposed balance of site awnings would be slightly beneficial by providing some shielding from wind-driven rain to the covered area. Given the above, no adverse wind impacts are anticipated for the Proposal and Mod 13 is expected to have a limited environmental impact from a wind perspective.

9.11 LIGHTING IMPACTS

The SEARs require the modification application to outline specific design features including “*street lighting, pedestrian lighting, and feature lighting*”.

A Site-Wide Lighting Management Plan has been prepared by WSP and is provided at **Appendix T**.

The objectives of the Lighting Management Plan are to:

- ◆ Create a strong and harmonious visual identity for The Star Sydney at night encouraging more frequent visits by

local residents and tourists;

- ◆ Improve and coordinate the night-time illumination across the property as a whole to ensure pedestrian safety, architectural appreciation, and night-time entertainment;
- ◆ Provide best practice guidelines for the exterior lighting;
- ◆ Promote a glare free night-time environment for vehicular traffic and pedestrian movement;
- ◆ Utilise the latest smart lighting technologies for connectivity and flexibility of control; and
- ◆ Implement high environmental lighting standards, to minimise light spill and 'sky glow' and conserve energy.

In preparing the Lighting Management Plan, WSP has assessed the currently installed external lighting and proposed upgrades under Mod 13 against all relevant standards and guidelines, including the following:

- ◆ AS 1158.3.1-2005 Lighting for Roads and Public Spaces Pedestrian area;
- ◆ AS 4282-1997 Control of the obtrusive effects of outdoor lighting; and
- ◆ The City of Sydney Exterior Lighting Strategy.

Figure 63 illustrates approved project's lighting on-site, showing the MUEF and parts of Darling Hotel, Astral Residences, Astral Hotel and the Pirrama Road façade illuminated. **Figure 64** shows the proposed special event lighting under Mod 13 on the Astral Hotel roof.



Figure 63 – Existing lighting on-site visible from Pyrmont Bay



Figure 64 – Special event lighting on Astral Tower Roof

The Lighting Management Plan also describes the proposed lighting that is part of Mod 13, including:

- ◆ Ritz-Carlton Hotel and Residential Tower;
- ◆ The Podium;
- ◆ The Ribbon;
- ◆ Darling Precinct; and
- ◆ Existing and proposed illuminated signage.

WSP concludes that the proposed external lighting will be delivered in accordance with the guidelines and parameters provided in **Section 6** of the report and with relevant Australian Standards including AS 4282-1997 Control of the obtrusive effects of outdoor lighting. Further the lighting complies with the Civil Aviation Safety Authority's "Lighting in the vicinity of Aerodromes." The proposed permanent lighting will follow the same guidelines as Development Approval under D2017/475. This consent approved the installation and lighting activation at The Star for the temporary event 'Vivid Sydney'.

The proposed external lighting under Mod 13 will adhere to the curfew hours of 6:00 pm to 11:00 pm approved under D2017/475.

As part of the Mod 14 Lighting Management Plan, the façade of the SELS including heritage details of the SELS Building façade will be illuminated. The façade lighting will utilise LED light sources with precise optical control to subtly illuminate key features with minimal light spill. According to the 'SELS Heritage Building Façade – External Lighting Design Compliance Report', by Point of View, the Modification 14 lighting scheme will comply with relevant regulations and Standards including Australian Standards AS4282 – Control of the Obtrusive Effects of Outdoor Lighting.

9.11.1 Special Events Lighting

The proposed special events lighting is described in detail in The Site-Wide Lighting Management Plan at **Appendix T**.

It is proposed that the temporary Vivid Sydney lighting installation become a permanent installation at The Star for special events. This installation consists of thirty-six (36) Clay Paky Super Sharpys and thirty (30) LED flood EX36 moving projector lights mounted to the roof of the Astral Towers.

The proposed hours of operation are from 6:00pm to 11:00pm during Vivid Sydney and dusk to 11:00pm for other special event nights for up to 53 nights per calendar year (including 21 days for Vivid).

As noted in the Site-Wide Lighting Management Plan, the proposed external lighting as part of Mod 13 will be designed in accordance with the guidelines and parameters provided in **Section 8** of this report and with relevant Australian Standards including AS 4282-1997 Control of the obtrusive effects of outdoor lighting and the Civil Aviation Safety Authority's 'Lighting in the vicinity of Aerodromes.' An assessment of the external lighting confirming the illuminance levels and luminous intensity levels in accordance with AS 4282 will be provided during the design phase and prior to the issue of the relevant Construction Certificate.

9.11.2 Mitigation Measures

- ◆ The assessment notes that the currently installed lighting is a combination of both traditional and contemporary light sources reflecting the progressive nature of developments on the site. The existing lighting control system is integrated for individual areas/zones, but is not integrated property wide, and some components of this system are dated.

To address this, the Lighting Management Plan recommends a Master Lighting Control system to allow for centralised control of all external lighting including event lighting.
- ◆ The proposed illuminated signage will be in keeping with the City of Sydney development consent D2011/988, which approved the replacement of existing illuminated building identification signage the Astral towers, and set out signage design principles. The illumination will be static and dimmable for flexible control of luminance levels to suit a range of ambient light levels from dark of night to fully sunlit conditions. Proposed illuminated signage shall be designed in accordance with industry best practice and relevant guidelines.
- ◆ The Lighting Management Plan provides lighting performance guidelines which need to be followed for external lighting upgrades across the site as part of Mod 13. These guidelines also provide recommendations to mitigate environmental impacts relating to the proposed lighting, covering the following:
 - The relevant Australian Standards and Minimum Performance guidelines that apply to exterior illumination and need to be complied with;
 - Lighting Design Guidelines;
 - Property-wide Lighting Design Coordination - recommendations to support the integration of the exterior lighting across the property and enhance a cohesive night-time experience;
 - Recommendation to hire a specialist lighting designer to undertake the lighting design work on the property, and relevant qualification requirements;
 - Lighting controls including a master lighting control system to allow centralised control of all external lighting including even lighting;
 - Energy Efficiency and Environmental Considerations;
 - Safety and Security;
 - Glare and Light Spill; and
 - Maintenance.

9.11.3 Conclusions

In accordance with the recommendations of the Lighting Management Plan, a Master Lighting Control system will be implemented prior to occupation to allow for centralised control of all external lighting including event lighting. The proposed special events lighting will follow the same guidelines as Development Approval under D2017/475 and adhere to the curfew hours. When considered in the context of The Star as an entertainment destination and the surrounding activation of Darling Quarter, SICEEP, the 'Ribbon' development and Barangaroo, the impact is considered appropriate and acceptable.

Further, it is anticipated that impact of the illuminated signage will be low as, through compliance with industry best practise design and relevant guidelines to mitigate environmental impact.

An assessment of the external lighting confirming the illuminance levels and luminous intensity levels in accordance with AS 4282, as well as the guidelines and parameters provided within the Lighting Management Plan, will be provided during the design phase and prior to issue of the relevant Construction Certificate.

The lighting Management Plan concludes that in the context of The Star as an entertainment destination and in the context of other developments in Darling Harbour including Barangaroo and the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP), as well as the strict curfew restrictions, it is anticipated that the lighting environmental impacts of the Proposal in comparison to the Approved Project will be limited.

9.12 AIR QUALITY AND ODOURS

The SEARs require the modification application to address potential air quality and odour impacts, in particular during the construction and operation of the Proposal, and outline the appropriate mitigation measures.

An Air Quality Report has been prepared by WSP and is provided at **Appendix EE**.

The assessment addresses the operational impacts of the Proposal to 14 local sensitive receptors identified within the vicinity of The Star.

WSP has assessed air pollutant emissions from the following potential sources:

- ◆ Dust emissions during construction,
- ◆ Nitrogen dioxide (NO₂) as a result of the carpark's ventilation system,
- ◆ Odour as a result of operation of the commercial ventilation system, and
- ◆ Nitrogen dioxide (NO₂), sulphur dioxide (SO₂), carbon monoxide (CO), total volatile organic compounds (tVOCs) and particulate matter less than 2.5 microns in diameter (PM_{2.5}) from the gas turbines.

The Air Quality Report concludes that:

- ◆ Dust issues associated with demolition and construction activities are unlikely to occur due to the types of construction activities planned and management practises to be implemented by the construction manager onsite. Any issues that may arise will be controlled by mitigation measures as addressed in the Air Quality Report and summarised below.
- ◆ Regarding air quality, no surrounding activities identified that had the potential to impact upon The Star.
- ◆ A qualitative assessment of the potential impact to air quality as a result of the commercial exhaust vent and the car stacker's basement carpark ventilation system determined that air quality and odour impacts would be unlikely to arise due to incorporation of ventilation control technologies.
- ◆ Air quality emissions associated with the proposed six gas turbines were modelled at 10 discrete sensitive receptors for NO₂, SO₂, CO, tVOCs and PM_{2.5}. Four additional receptors were assessed using contours of one-hour NO₂ cumulative impacts. The results indicated that the relevant NSW EPA air quality criteria were met at all sensitive receivers.

9.12.1 Mitigation Measures

The Air Quality Report provides mitigation measures to manage sources of air contaminants during construction through a hierarchy of emission control measures which are prevention, suppression and containment. The mitigation measures include:

- ◆ Vehicles and plant/equipment should be fitted with appropriate emission control equipment and be serviced and maintained in accordance with the manufacturers' specifications;
- ◆ Loads comprising loose material entering or leaving a site should be covered;
- ◆ Dusty activities should be dampened, particularly during dry weather;
- ◆ Drop heights for materials should be minimised to control the fall of materials;
- ◆ The number and size of stockpiles should be minimised. Stockpiles should not be located close to the site boundary possible, and should take into account predominant wind directions. Where possible and feasible, stockpiles should be covered or enclosed and protected from the wind;
- ◆ Cutting of materials such as concrete slabs or bricks should be undertaken with extraction or suppression where possible. Pouring water over material as it is being cut can greatly reduce the amount of dust generated;
- ◆ The diesel generators will only operate as an emergency power supply. These generators are tested on a monthly basis as part of a routine maintenance program;
- ◆ The exhaust discharge has been designed in accordance with Australian Standard (AS) 1668.1:2015; AS 1668.2:2012 and AS3666.1:2011;
- ◆ As a proactive measure to reduce emissions from the diesel generators during maintenance, the following management practices will be implemented:
 - Generator testing will be staggered. Only one generator will be turned on and test at a time.
 - Generators will only be tested at 50% load. Skips should be securely covered; and
 - Materials should be removed from site as soon as practicable.

9.12.2 Conclusion

Given the findings and conclusions of the Air Quality Report, it is anticipated that the Proposal will not have an adverse impact on air quality including odours. It is considered that dust issues associated with demolition and construction activities can be adequately managed through implementation of management measures identified in the report to be incorporated into the detailed Construction Management Plan to be prepared prior to issue of the relevant Construction Certificate.

9.13 NOISE AND VIBRATION

The SEARs require the modification application to *“address potential air quality, noise and odour impacts, in particular during the construction and operation of the development and appropriate mitigation measures.”* The SEARs also require the following policies, guidelines and plans to be addressed:

- ◆ NSW Industrial Noise Policy,
- ◆ Environmental Criteria for Road Traffic Noise (NSW EPA),
- ◆ Environmental Noise Control Manual (OEH), and
- ◆ Development Near Rail Corridors and Busy Roads – Interim Guideline 2008.

In addition, Major Project Approval MP08_0098 includes conditions of approval relating to activity areas within The Star and nominates numerical criteria to be complied with. These conditions include Condition E1 and F4 (Mechanical Plant), Conditions F1A to F1E relating to trial use of speakers for various outdoor areas on the site, Condition F5 (entertainment noise criteria), and Condition D 11 (Construction Noise).

A Noise and Vibration Impact Assessment has been undertaken by WSP to assess the acoustic impacts associated with Mod 13 and address the SEARs as well as the relevant matters for consideration listed above. This report is provided at **Appendix K**.

The Noise and Vibration Impact Assessment addresses the following aspects of the development:

- ◆ **Noise egress (entertainment noise):** overall contribution from entertainment noise defined as follows:
 - **Patron noise** – noise sources of people and associated activities including people’s voices (unamplified) and noise from gaming machines.
 - **Music noise** – noise sources from sound systems including amplified music, amplified speech, and music performance related noise such as musical instruments.
- ◆ **Noise egress (operational):** from the operation of the development from mechanical plant and equipment noise. It is the overall contribution from stationary and mobile plant on site.
- ◆ **Noise ingress on The Star from external sources**
- ◆ **Traffic noise;**
- ◆ **Light rail noise and vibration;**
- ◆ **Internal acoustic environment;** and
- ◆ **Construction noise and vibration.**

9.13.1 Site Wide Acoustic Strategy and 3D Noise Model

The conditions of consent for MP08_0098 set out cumulative noise level limits that are to be met at receivers outside the site boundary.

A site-wide approach to noise emission limits applies because multiple noise sources may contribute to the overall noise level at a receiver location. However, verification of compliance with noise limits is problematic at sensitive receivers surrounding the site because of the dynamic characteristic of the urban noise climate and because it is often difficult to access premises to undertake compliance testing.

Therefore, a Verification Noise Plan (VNP) is recommended by WSP (being a combination of measurement and computation) to resolve this difficulty. Use of the VNP allows the level of noise emitted from the various individual noise sources within The Star to be set so that cumulatively they will comply with the conditions of consent and in addition provides a rapid validation of and response to any complaints should they occur.

In order to set the noise emission criteria for assessment and to determine the levels of existing ambient noise, an environment noise survey was undertaken at seven locations representative of the surrounding sensitive receivers.

The assessment considered the noise emissions from mechanical plant, patron and music noise in addition to other noise sources such as vehicle movements on site in order to determine the noise levels that should be met at the nearest affected sensitive receivers in accordance with the relevant noise policies and conditions of consent noted above.

In order to undertake the assessment, WSP has developed a three-dimensional computer noise model using software SoundPlan (version 7.4) and calculation method in accordance with ISO 9613-2. Further detail on the Noise Model parameters is provided within the Noise Impact Assessment at **Appendix K**.

9.13.1 Nearby Noise Sensitive Receivers

In undertaking the assessment, the following sensitive receivers were identified which include a mix of commercial and residential uses:

- ◆ Receiver 1 - 77-89 Pymont Street
- ◆ Receiver 2 - 94-136 Harris Street

- ◆ Receiver 3 - 39-43 Pyrmont Street
- ◆ Receiver 4 - 88 John Street
- ◆ Receiver 5 - 135 Point Street
- ◆ Receiver 6 - 18 Pyrmont Street
- ◆ Receiver 7 - 2 Jones Bay Road
- ◆ Receiver 8 - 26 Point Street
- ◆ Receiver 9 - 48 Pirrama Road
- ◆ Receiver 10 - 56-56A Pirrama Road
- ◆ Receiver 11 - 52 Pirrama Road
- ◆ Receiver 12 – 99 Pyrmont Street
- ◆ Receiver 13 - 91 and 93 Pyrmont Street
- ◆ Receiver 14 - Pyrmont Street Residences
- ◆ Receiver 15 - 13A-29 Union Street
- ◆ Receiver 16 - 31 Union Street
- ◆ Receiver 17 - 33-35 Union Street
- ◆ Receiver 18 - 37-69 Union Street
- ◆ Receiver 19 - 60 Union Street
- ◆ Receiver 20 - 8 Jones Bay Road
- ◆ Receiver 21 - 63 Edward Street
- ◆ Receiver 22 - 65 Edward Street
- ◆ Receiver 23 - 27-37 Pyrmont Street
- ◆ Receiver 24 - 9 Union Street

The location of the sensitive receivers are shown in the map at **Figure 65** below.



Figure 65 – Location Map of Sensitive Receivers (Acoustic)

9.13.2 Conclusions

The Noise Impact Assessment makes the following conclusions regarding the Proposal:

- ◆ The mechanical plant and operational noise associated with the Proposal can comply with the assessment criteria and have limited environmental impacts. The noise levels are similar during the day and the night for the majority of receivers as mechanical plant operation is the primary noise source. As The Star is a 24-hour operation, the mechanical plant is required to work for the whole period and therefore does not necessarily reduce during the night period. Receiver 8 overlooks the service road and the noise level at this receiver is influenced by the different day and night vehicle movements on the service road.
- ◆ The predicted cumulative noise levels from patrons and music at residential receivers from all existing, approved and proposed sources on the development indicate that compliance can be achieved with the assessment criteria during the day and night.
- ◆ Operational noise as a result of Mod 13 has been assessed as able to meet the requirements of the SEARs.
- ◆ Low impact internal works within the building that are expected to have no adverse impact on nearby residents when undertaken in accordance with Condition D11.
- ◆ The potential for external ambient noise to impact noise sensitive uses including hotel bedrooms and residential units has been assessed. The report provides indicative glazing specifications for residential bedrooms directly on the façade.
- ◆ Vibrational impacts – the existing vibration levels from light rail movements were measured and found to be low. It is expected that structure-borne noise and vibration from light rail movements will have a negligible impact on the residences within the tower.
- ◆ Construction noise and vibration – construction noise and vibration will be managed in accordance with the Interim Construction Noise Guidelines, State vibration guidelines, the Road Noise Policy, and the requirements of the existing project approval MP 08_0098.

- ◆ Road traffic noise – the Noise Impact Assessment notes that, as the road traffic noise levels were already above the relevant criteria prior to the approval of MP08_0098, it is beyond the power of SEGL to reduce noise levels to or below the criteria. Accordingly, a baseline level of assessment as at Modification 7 (as it is the earliest modification where traffic volumes were predicted to increase) has been selected as the most appropriate point of comparison. WSP's assessment is limited to identifying where noise levels increase by more than 2 dB from this baseline as a result of the subsequent modifications to MP08_0098 since Modification 7. WSP has assessed Mott MacDonald's Traffic Impact Statement, and concludes that the total noise level would not increase by more than 2 dB during the day or night period due to the traffic changes on Pyrmont Street, Pyrmont Bridge Road, Union Street, and Edward Street.
- ◆ On Edward St south of Union Street, Modification 13 is forecast to increase noise levels during the AM and PM peaks and reduce traffic during the off-peak period. The increases are predicted to be less than 1 dB during the AM peak and 2 dB during the PM peak. As the baseline noise levels are already above the RNP criteria, any increase in noise level should be limited to 2 dB. The increases due to Modification 13 do not exceed 2 dB. Modification 7, however, identified an increase of 3 dB in the off-peak period on Edward Street, but did not consider it a significant impact as it would occur only during the peak period when the MUEF is operating. As a result, no mitigation measures were deemed necessary.

In contrast, Modification 13 does not increase traffic on this section and therefore is not considered to provide additional impacts above those identified in Modification 7. The traffic volume increases due to Modification 13 are less than those brought about by Modification 7 and are not expected to significantly increase traffic noise levels over the baseline conditions and are considered to satisfy the requirements of the RNP. As a result, it can be concluded that there will be limited environmental impact.
- ◆ The WSP Report has been peer reviewed by Renzo Tonin and Associates to provide an independent review of the Noise Impact Assessment methodology and findings. The report found that the *"methodology used to establish noise criteria [was] in accordance with established EPA guidelines and policies"* and concluded that *"the WSP Report satisfies the requirements of the SEARS"* and the Peer Reviewer supports its findings.

9.13.3 Mitigation Measures

- ◆ During the detailed design process, consideration must be made for the selection and design of all mechanical equipment that emits noise. If selected equipment is in excess of these criteria or the noise levels vary from those detailed in the WSP Noise and Vibration Impact Assessment, additional assessment shall be carried out and acoustic mitigation measures shall be provided. These measures may include, but are not limited to:
 - Siting and location of plant rooms and equipment;
 - Attenuators;
 - Noise barriers;
 - Acoustic louvres; and
 - Acoustic absorption to plant rooms.
- ◆ In order to achieve the noise criteria for entertainment noise, the noise levels of patrons and music must be equal to or lower than the noise levels detailed by WSP. If required, acoustic mitigation shall be provided, these measures may include siting and location of areas, acoustic screens or barriers, partial or full enclosure; number of speaking, sound level limiters, acoustic louvres and acoustic absorption and reverberation control.
- ◆ To minimise the risk of impacts above those predicted caused by unexpected events, it is recommended that The Star incorporate best practice operational noise management measures as listed in WSP's report into its Operational Noise Management Plan (ONMP) as required in condition B5 to account for the changes associated with Modification 13
- ◆ Prior to the issue of the relevant Occupation Certificate, the Operational Noise Management Plan is to be updated to incorporate measures outlined in WSP's Noise and Vibration Impact Assessment.
- ◆ Construction noise from the Proposal to be managed and assessed in accordance with the Interim Construction Noise Guidelines as detailed in the Noise and Vibration Impact Assessment.

- ◆ The hours of works for construction specified in Condition D11 of the Approval are primarily to control construction noise from adversely impacting nearby sensitive receivers and should be strictly adhered to.
- ◆ In order to minimise noise ingress into the development, WSP has provided indicative glazing performance recommendations for the hotel and residential sleeping areas. The calculations indicated that the internal noise levels would not be able to be met with windows open for the residential units. Where facades are closed, or operable windows are required to be closed to meet internal noise limits, ventilation requirements will be met through mechanical ventilation solutions and attenuated natural ventilation paths. This will be done through a combination of ducted façade louvres and trickle vents in the spandrel which will include appropriate acoustic treatment as detailed in the Mechanical Services report and Architectural drawings.
- ◆ To minimise human exposure to whole-body vibration, compliance with AS 2670-2 "Evaluation of human exposure to whole-body vibration – Part 2: Continuous and shock induced vibration in buildings" is recommended, in accordance with Table 6.2 of WSP's Noise and Vibration Assessment.
- ◆ No ground born noise is to be created between 6pm and 7am on any day of the week.
- ◆ To ensure human comfort (amenity) the maximum vibration values outlined in Assessing Vibration: A Technical Guideline (December 2006) should be considered.
- ◆ To minimise the risk of entertainment noise from licensed premises from being audible within habitable spaces of nearby residential receivers, the following operational noise managed strategies are recommended:
 - Patrons are to be restricted from accessing the following licensed areas between midnight and 7 am:
 - Level 5 undercover bar areas fronting Pirrama Road
 - Ribbon Pool Bars

Implementation of the recommended management strategies above will ensure entertainment noise emission from The Star achieves the external design criterion of 10dB below the background level in each octave band. This minimised the risk of entertainment noise being audible within habitable spaces of nearby residential receivers.

9.13.4 Conclusion

It is anticipated that environmental impacts relating to mechanical and plant noise, patron and music noise, cumulative road traffic noise, and noise egress can be adequately mitigated and managed in accordance with the recommendations provided in the Noise Impact Assessment at **Appendix K**.

The Noise Impact Assessment has assessed the noise impacts that will be generated by the Proposal in comparison to the Approved Project in relation to mechanical plant and equipment, operational noise, entertainment noise from licensed premises, road traffic noise, and construction noise including construction traffic noise,

The mechanical plant and operational noise impacts of the Proposal can comply with the existing conditions at the off-site residential and commercial receivers.

The cumulative noise emissions from the entertainment areas of the Proposal and the Approved Project will be able to meet the entertainment noise condition criteria at the off-site residential and commercial receivers. During the detailed design process, noise emissions shall continue to be reviewed to ensure compliance.

The potential for road traffic noise impacts to occur on the surrounding roads as a result of the additional traffic generated by Modification 13 was assessed in line with the NSW Road Noise Policy. The assessment considered the forecast traffic growth and traffic generation from The Star, provided by Mott Macdonald, and the impact of previous modifications to the MP08_0098 on traffic growth. The assessment predicted that Modification 13 can comply with the provisions of the RNP.

The potential for external ambient noise to impact noise sensitive uses of the proposed development including hotel bedrooms and residential accommodation were also assessed. Several glazing and façade specifications have been incorporated into the design of the Tower to ensure adequate acoustic amenity to the hotel and residential users while maintaining adequate ventilation.

A noise and vibration assessment of typical construction equipment was assessed in line with the Interim Construction Noise Guideline and Australian Standard AS 2436-2010. The assessment identified noise management levels and mitigation strategies for managing noise and vibration where these levels are exceeded.

Measurements of the light rail vibration indicate that structure-borne noise and vibration will not impact the residential and hotel areas in the proposed modification.

Various noise mitigation measures have been provided to ensure that noise emissions from the various sources discussed above (as a result of the Proposal as well as the Approved Project) are within established criteria.

The Noise Impact Assessment has reviewed the change in noise level between the Approved Project and the Proposal in accordance with the criteria set out in the relevant policies, guidelines and conditions of consent. On the basis of this review, it is concluded that the Proposal will have limited environmental impacts beyond the Approved Project in terms of noise and vibration impacts.

9.14 PUBLIC TRANSPORT

The SEARs require the modification application to “include a Traffic and Transport Impact Assessment that:

- ◆ *Assesses the ability of existing and future public transport networks (including light rail, ferry and bus networks) to accommodate the forecast number of trips generated by the Proposal;*
- ◆ *Assesses and details the impacts on the light rail (including passenger access to platforms) to ensure the development does not adversely impact on its safe and efficient operation;*
- ◆ *Outlines existing public transport services and opportunities for greater usage for works and visitors.”*

These requirements are addressed in detail within the Traffic Impact Statement (TIS) by Mott MacDonald provided at **Appendix J**. The key conclusions of the TIS are summarised below.

9.14.1 Light Rail

The works to the Level B2 transport interchange will improve pedestrian and bicycle access to the light rail platform and adequately accommodate the increased pedestrian and bicycle movements associated with Mod 13.

The light rail service currently operates between Central and Dulwich Hill, with services to The Star operating 24 hours a day. The TIS notes that the light rail services are currently highly utilised in the AM and PM peak periods, with up to 95% of total capacity occupied.

However, the TIS notes that a major portion of this usage is associated with commercial land uses in the surrounding areas unrelated to The Star, and any further increases in service frequencies in response to increased levels of demand are a commercial matter for the operator Transdev. A meeting with Transdev, the applicant, and the traffic consultant occurred on 02 August 2017. The meeting minutes are provided within the appendices of the Traffic Impact Statement at **Appendix C**.

9.14.2 Ferry

No works are proposed to the existing ferry services of Pyrmont Bay Wharf. As noted in the TIA, the ferry services have sufficient capacity to accommodate the additional staff and visitor trips generated by Mod 13.

9.14.3 Bus

The proposed design of the Ritz-Carlton porte-cochere will maintain the northbound Sydney Buses bus stop adjacent to the proposed Ritz-Carlton porte-cochere, and not impact its operation during the operational phase of the project. Refer to **Section 9.20** for a discussion on the impact on bus services during the construction phase of the project.

Community consultation that was undertaken as part of Mod 13 identified infrequency of bus services as a major issue for the community.

However, as noted in the TIA, a review of the timetables and the data indicate that the Sydney Buses that service the area are currently underutilised throughout most of the day, with the greatest demand occurring in the PM weekday commuter peak.

The TIS concludes that there is sufficient capacity within the Sydney Bus network to accommodate the additional staff and visitor trips generated by this Proposal.

9.14.4 Taxi

The relocated taxi rank in the service road at Level B2 (moved to this location as part of Mod 14), will be formalised into a taxi rank with a new taxi queuing system for managing waiting patrons in the Pirrama Road plaza.

This formalised taxi rank will also accommodate the taxies from the Jones Bay Road feeder rank, which is proposed to be removed as part of the Jones Bay Road port-cochere right hand turn works.

The proposed taxi call-up system will service the Ritz-Carlton hotel, the Astral Hotel, the Casino, and Astral Residences from a central taxi rank.

This centralised internal taxi rank will significantly increase on-site taxi storage, and address the noise and traffic amenity issues associated with the existing taxi rank arrangements on Pirrama Road and Jones Bay Road.

The Proposal to relocate the taxi rank to the service road will also help activate the light rail station and improve passive surveillance in this location.

9.14.5 Train

The site is within a 15-minute walk of Town Hall station.

The Metro West Proposal includes an indicative location for a future station at Union Square. The indicative location is within 200 metres of The Star, and represents a major long-term opportunity to further improve public transport choices for visitors and staff travelling to The Star.

With the proposed upgrades to CBD heavy rail services proposed as part of the CBD Metro project, there is sufficient capacity to accommodate the proposed increase in visitor and staff trips by rail.

Given the site is well serviced by public and active transport links, the TIS concludes that there is sufficient capacity for the existing public transport networks to accommodate the additional trips generated by the proposed works in Mod 13.

9.14.6 The Draft Star Green Travel Plan

A draft Star Green Travel Plan has been prepared by Mott MacDonald and is located at **Appendix WW**. The draft Star Green Travel Plan sets out the actions and timeframes that SEGL will commit to, to provide more convenient, safe and more sustainable travel options for its staff and visitors both now and in the future. The draft Star Green Travel Plan is a package of site-specific measures identified to promote more sustainable modes of travel and to manage the use of private car. It generally supports walking, cycling, public transport and car sharing.

The City of Sydney Draft Travel Planning Guidelines outline the following requirements for an effective Travel Plan:

- ◆ Site audit and data collection;
- ◆ Objectives and targets that define the direction and purpose of the travel plan;

- ◆ Actions that will help achieve the objectives;
- ◆ A strategy for promoting and marketing the actions;
- ◆ Commitment of resources, including financial support and human resource;
- ◆ A monitoring and reviewing process that measures the impacts of the travel plan; and
- ◆ Governance support including appointing of a coordinator or committee.

The Star Draft Green Travel Plan aims to achieve the following targets, over a three-year period. The intention of these targets is to focus on short-term achievable actions to provide a foundation for the longer-term. **Table 23** outlines the proposed modal share targets.

Table 23 – Forecast Increase in Daily Employee Trips by Mode

Mode	2016 Existing Mode Share %	2019 Target Mode Share %	% Change By Year-3
Walk	6.6	7.3	+10
Cycle	0.5	1.5	+300
Public Transport	35	38.5	+10
Car Pool	7.5	8.2	+10
Motorcycle	2.7	3	+10
Taxi/ Ride Share	0.4	0.4	-
Car	44.5	38.4	- 16
Other	2.7	2.7	-
TOTALS	100	100	

The actions of the Draft Star Green Travel Plan are summarised below:

Year One:

- ◆ Establish the Travel Plan Champions (TPC).
- ◆ Call out to team members (staff) to nominate to be part of the TPC.
- ◆ Put the Adopted Travel Plan on The Star's internal and external webpages.
- ◆ Incorporate Travel Plan into existing relevant corporate policies and initiatives.
- ◆ Promote the use of flexible working/remote policies.
- ◆ Undertake a night-time audit of walking routes between The Star and public transport to check lighting, casual surveillance and overall personal safety.
- ◆ Encourage cycling to/from work with incentives and promotions.
- ◆ Consider providing staff with discounted rates to use car share as an option for staff needing to commute for late-night or early-morning shifts.
- ◆ Provide Opal cards at reception for staff to use for travel to meetings.
- ◆ Provide advice to business visitors who come from the airport to travel to The Star and around Sydney using a pre-paid Opal card and provide information on nearby train stations/bus stops.
- ◆ Provisions of more and larger lockers, more showers and bike parking.
- ◆ Promote reduction of The Star's carbon footprint/energy use, as well as promoting staff wellbeing and health, by promoting walking targets, and participation in relevant organised corporate events such as "Walk to Work day",

“Ride to Work day”, “Step-tember” (September), “Sydney Rides” (October).

- ◆ On The Star’s “getting here” webpage, include a map showing the location of the light rail stop, nearby bus and ferry stops, walking and cycling routes to/from nearby nodes (such as rail stations, and other attractions such as Darling Harbour), car share pods, car parking stations.
- ◆ Set up a voluntary staff “travel-buddy” matching system.
- ◆ Increase the supply and reduce the cost of motorcycle parking.
- ◆ Promote car share services to hotel patrons as another option in addition to hire cars.
- ◆ Provide convenient public bicycle parking near street entrances at The Star and at Star Casino light rail stop.

Year Two:

- ◆ Introduce a staff shuttle bus.
- ◆ Investigate extending the ‘free light rail’ trips for staff.
- ◆ Seek approval to provide financial incentives.
- ◆ Launch a “Star Supports your Commute” promotional month, where incentives are given to staff for trying out or using public or active transport.
- ◆ Work with Transport for NSW to develop and support actions from its Sydney City Centre Access Strategy.

Year Two and Ongoing:

- ◆ Investigate a high-quality Premium Cycle Hub.
- ◆ Develop strategic partnerships with nearby attractions to promote active and public transport access.
- ◆ Continue to monitor use and availability of parking.
- ◆ Monitor availability and adequacy of “end-of-trip” facilities.

9.14.7 Summary

The TIS notes that due to the shift work patterns at The Star, most future employee trips generated by Mod 14 and Mod 13 will fall outside the commuter peak demand periods, with the AM and PM commuter peak hours accounting for only 13% and 15% respectively of the total daily employee trips. The main shift changeover times are 4 am, midday, and 8 pm.

Similarly, The Star visitor peaks fall outside the public transport commuter peak demand periods, when public transport services are under-utilised. Further, the draft Star GreenTravel Plan outlines actions to promote greater usage of more sustainable travel options for its staff and visitors.

Table 24 – Forecast Increase in Daily Employee Trips by Mode

Mode	Current Staff mode	MOD14 Daily Trips	MOD13 Daily Trips
Car	52.4%	66	166
Train	21.7%	27	69
Active	7.1%	9	22
Light Rail	6.2%	8	20
Bus	6.2%	8	20
Motorcycle	2.7%	3	9
Ferry	0.9%	1	3
Other	2.8%	3	9
Total	100%	125	316

9.14.8 Conclusion

The site is well-connected to several modes of public transport. By improving the interface of the site with various public transport options, including light rail, buses, and taxis, this will encourage a mode shift to public transport usage in relation to trips to and from the site.

Given the conclusions of the TIS noting that the existing public transport networks and services either have spare capacity or will not be affected by Mod 13, the Proposal is anticipated to have a positive impact in terms of public transport patronage.

The draft Star Green Travel Plan aims to encourage sustainable travel amongst staff, improving access options to The Star and minimise staff travel impacts on local transport networks. The draft Star Green Travel Plan will benefit The Star, government agencies and the local community by reducing reliance on private modes of transport, reduce costs, improve road capacity, and promote a sustainable community-friendly development.

9.15 ACCESS AND PARKING

The SEARs require the modification application to include *“a Traffic and Transport Impact Assessment that:*

- ◆ *evaluates daily and peak hour vehicle, public transport and pedestrian movements likely to be generated by the development (construction and operation) including peak traffic movements;*
- ◆ *models and assesses the current and future performance of key intersections providing access to the site under ‘project and ‘no project’ scenarios, and identifies any upgrades (road/intersections) required as a consequence of the Proposal;*
- ◆ *evaluates the cumulative impacts and potential conflict with traffic movements generated by existing and approved development in the vicinity of the site;*
- ◆ *details existing and proposed vehicular access and car parking arrangements for workers and visitors (cars, coaches/buses & taxi ranks), including compliance with parking codes and Australian Standards;*
- ◆ *details of the potential impacts to access and manoeuvring in the bus interchange;”*

In addition, the ISEPP identifies matters for consideration in the assessment of development adjacent to particular types of infrastructure development, including all new development that generates large amounts of traffic in a local area.

Clause 104 of the ISEPP states the following in relation to ‘traffic generating development’:

“(3) Before determining a development application for development to which this clause applies, the consent authority must:

- (a) give written notice of the application to RMS within 7 days after the application is made, and*
- (b) take into consideration:*
 - (i) any submission that RMS provides in response to that notice within 21 days after the notice was given (unless, before the 21 days have passed, RMS advises that it will not be making a submission), and*
 - (ii) the accessibility of the site concerned, including:*
 - (A) the efficiency of movement of people and freight to and from the site and the extent of multi-purpose trips, and*
 - (B) the potential to minimise the need for travel by car and to maximise movement of freight in containers or bulk freight by rail, and*
 - (iii) any potential traffic safety, road congestion or parking implications of the development.”*

The currently Approved Project on the site is “traffic generating development” pursuant to Schedule 3 of the ISEPP. Accordingly, it is anticipated that DP&E will notify the application to RMS and take into consideration any submission received from RMS.

The TIS at **Appendix J** addresses these requirements of the SEARs and clause 104(3)(b) of the ISEPP. The key findings and conclusions of the TIS in relation to access and parking are summarised below.

9.15.1 Vehicle Access

Jones Bay Road right turn access to porte-cochere

Access to the porte-cochere from Jones Bay Road is currently restricted to a left-turn entry only, forcing taxis and valet parking arrivals to approach via a circuitous route via Murray Street, Pirrama Road and Jones Bay Road. Alternatively, a more direct approach via Pyrmont Street requires users to travel east down Jones Bay Road and perform a U-turn at the Pirrama Road roundabout, or illegal mid-block U-turns.

The proposed right turn access into the Porte Cochere off Jones Bay Road will mitigate these existing traffic circulation issues.

Given the proximity of the Port Cochere entry to Pyrmont Street and the complexity of the site, the arrangement was assessed using VISSIM micro-simulation software. The simulation confirms that the proposed arrangement operates satisfactorily and would not result in any queuing issues during peak periods. Video files of the microsimulation are provided with this lodgement package.

As shown in **Figure 66**, the proposed line marking works will necessitate the loss of 5 on-street car parking spaces. However, it is anticipated that these could be offset by the proposed removal of the taxi feeder rank on the southern side of Jones Bay Road, which could release up to 6 new parking spaces.

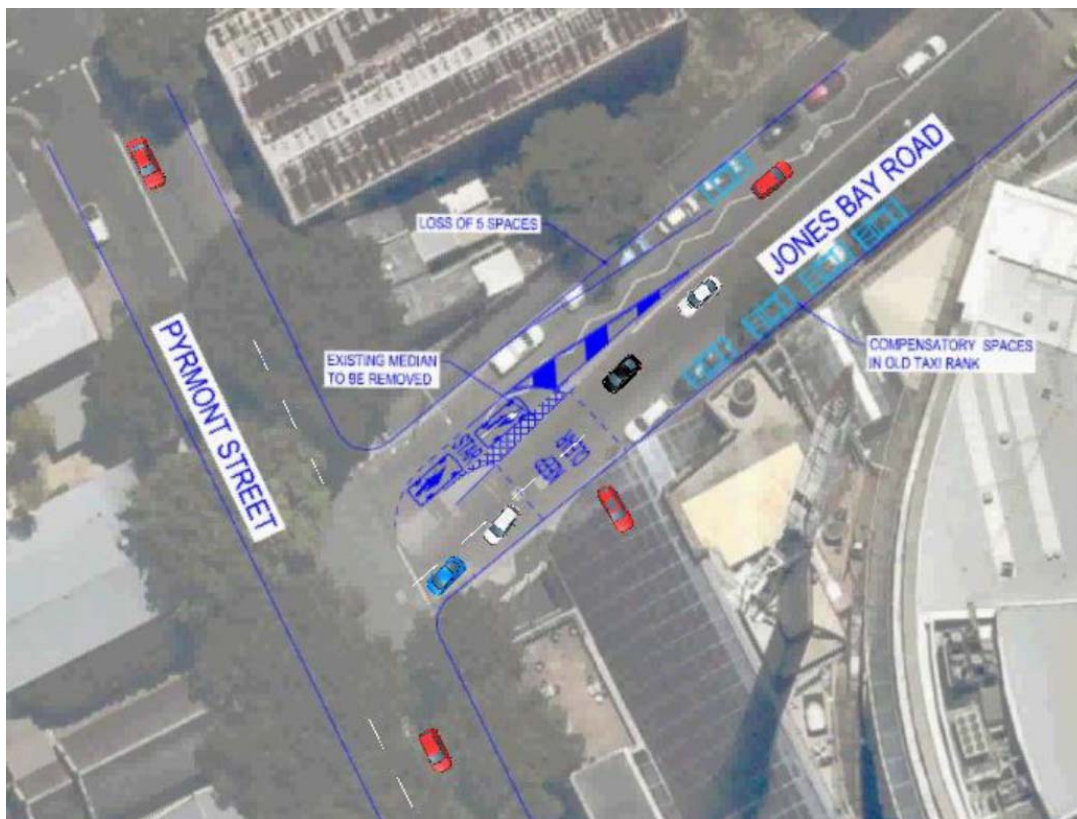


Figure 66 - Proposed Jones Bay Right Turn Access to Porte-Cochere

It is noted that the proposed right turn access to the Porte Cochere will necessitate deletion to Condition E10 of the Major Project Approval, as detailed in **Section 11**, which presentably prohibits the right turn movement.

Pyrmont Street car park entry

The new Pyrmont Street entry into the Level B1 car park will service Sovereign members visiting the site. The TIS notes that there are over 89,000 active sovereign members, with over 300 spaces within the basement car park dedicated to their use alone. A SIDRA analysis under Mod 13 forecast flows has been undertaken for the intersection. This analysis finds that the intersection will operate at Level of Service (LoS) 'A' in all peaks.

The TIS notes that this new access is crucial to mitigating the traffic impacts of the development by spreading impacts more evenly across the road network.

Ritz-Carlton porte-cochere

The Ritz-Carlton porte-cochere will service the hotel lobby and provide set-down and pick-up areas for 4-5 taxis or 2 coaches, as well as taxi access from the taxi rank located in the service road.

It is proposed to incorporate a right turn entry from Pirrama Road into the Ritz-Carlton porte-cochere to enable access to taxis waiting within the Level B2 taxi rank.

9.15.2 Parking Provisions – Basement

The Star is permitted to have a maximum of 3,000 car parking spaces across the whole site under the per MP08_0098. The current on-site car parking 2,795 spaces. The proposed Pyrmont Street Car Park Entry will necessitate the removal of 18 car parking spaces, bringing the total car parking spaces down to 2,777 spaces.

Mott MacDonald conducted a review of The Star car-park utilisation for the 9-month period ending September 2015. This review revealed an average 7-day occupancy rate of 74%, and a maximum occupancy rate of 92% on Saturdays, which leaves an average of 230 spare spaces. In rare cases where patrons were turned away, the excess was accommodated through on-street or private car parks within walking distance of The Star.

The non-tower components of the Proposal (including the balance of site works, neighbourhood centre, Level 05 Sky Terrace and Level 07 Ribbon) will result in an increase in GFA of approximately 9,435 m². Assuming the Sydney LEP 2012 provision of 1 car parking space per 150 m² of GFA, for a 'Category E' site with an FSR greater than 2.5:1, the increase in GFA would require 63 car parking spaces. Even with the proposed decrease in car parking from 2,845 spaces to 2,777 spaces at the completion of Mod 13, and the 44 car parking spaces required to accommodate Mod 14 works, it is anticipated that there will be sufficient spare capacity within the basement car park at The Star to accommodate the increase parking demand associated with the non-tower components of the Proposal.

9.15.3 Car Stacker

To accommodate the parking demand resulting from the residential and hotel uses within the tower, car parking spaces are proposed within the car stacker described in detail within **Section 4**. A Car Stacker Management Plan has been prepared and provided in **Appendix VV**.

As concluded by the TIA, the proposed car stacker will provide adequate car parking for the uses within the Ritz-Carlton Hotel and Residential Tower, based on the relevant Sydney DCP 2012 and Sydney LEP 2012 rates as set out in **Table 25** below.

Table 25 – Proposed Car Stacker Parking Provision

Use	Unit	No.	Rate	Spaces
Hotel	Rooms	100	1 per 4 bedroom	25
	Rooms	120	1 per 5 bedroom	24
Apartment (Residents)	1 bed	31	0.4	12
	2 bed	131	0.8	105
	3 bed	36	1.1	40
Apartment (Visitors)	Units	30	0.167 per dwelling	5
	Units	40	0.1 per dwelling	4
	Units	134	0.05 per dwelling	7
TOTAL				221

In accordance with Condition B3 of MP08_0098, the car stacker parking provision of 221 spaces will ensure that the total parking on the site will not exceed the approved maximum of 3,000 spaces.

The capacity of the system has been designed to cater for peak hour trips generated by the Ritz-Carlton valet service and Residential Apartments, ensuring that each unit can accommodate up to 24 parking movements per hour. Four “waiting bays” have been included on the western edge of the Service Road before the transfer cabins in the event of a system failure during peak parking periods.

The forecast demands are based on the following assumptions:

Valet parking trip generation based on observed valet parking rates for Astral and Darling Hotels, as listed in **Table 26**. RMS trip generation rates for high density residential apartment development in Pyrmont (0.18 and 0.10 trips per apartment in the AM and PM peaks, respectively).

Table 26 – Observed Astral & Darling Hotel Valet Parking Peak Tour Trip Generation Rates per room

Peak	Entry	Exit	Total
AM	0.02	0.06	0.08
PM	0.08	0.07	0.15

At least one of the storage retrieval units is fully accessible for wheel chair users. Swept path entry/exit access to the stacker retrieval units has been checked and confirmed for a B99 design vehicle as shown in **Figure 67** below.

As noted in the Car Stacker Management Plan at **Appendix VV**, prior to anyone parking a car in the system, they and their car must be inducted to ensure that 1) the user knows how to use the system correctly, 2) the car will fit into the system. Each car has its own unique FOB (Radio Frequency Identifier Chip) to operation terminal.

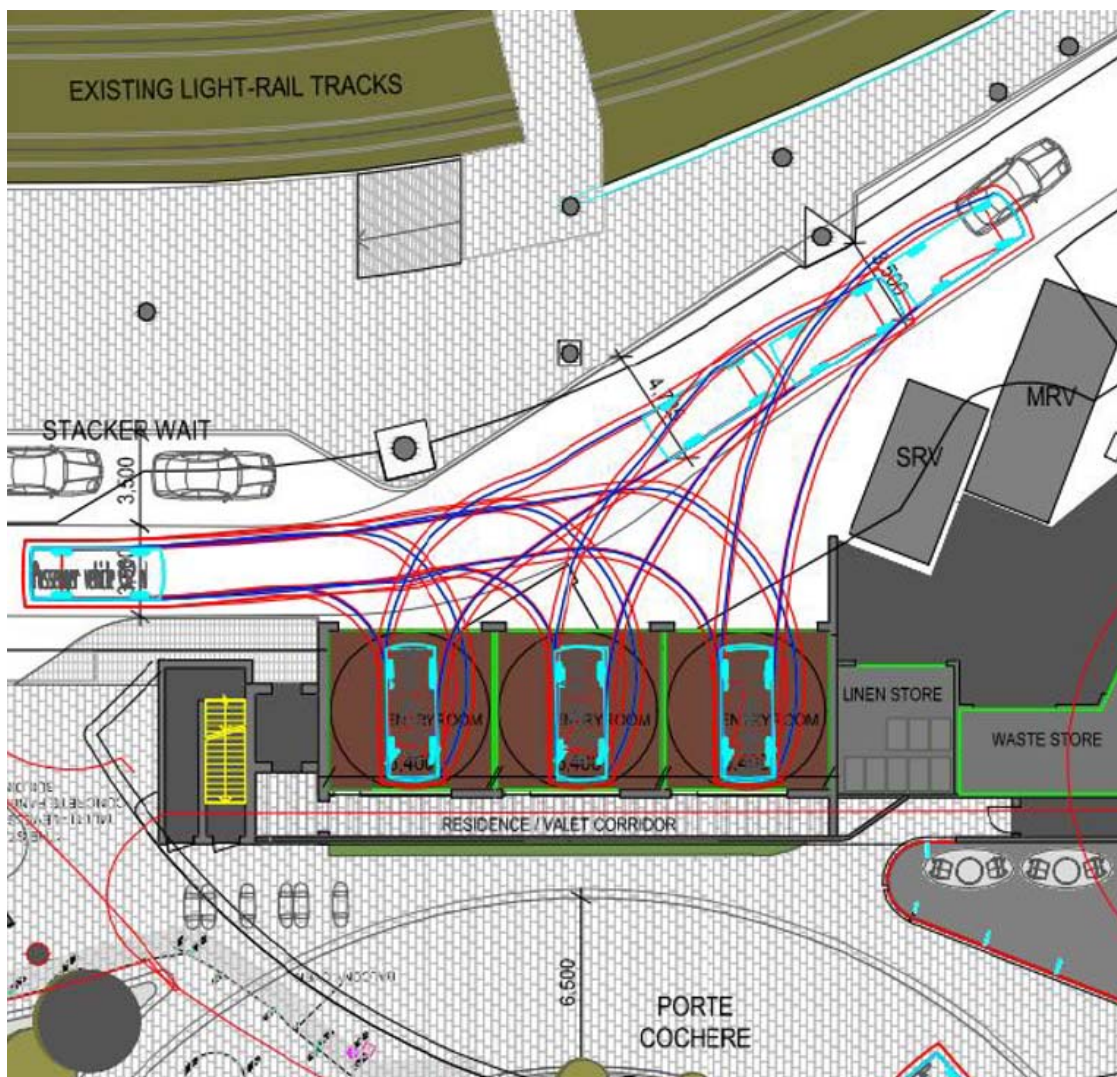


Figure 67 – Swept Path Analysis for the proposed Car Stacker

9.15.4 On-Street Parking

As noted in the TIA, there are approximately 2,892 off-street parking spaces within walking distance of the site, with Harbourside carpark located to the south of the site having the greatest number of vacancies. Given only 60% of the surrounding off-street car parking spaces are used during business hours, up to 1,150 spaces are available for use by patrons of The Star as an alternative to on-site parking.

Given the above, it is not anticipated that the proposed development will place undue pressure on the surrounding on-street parking.

In addition, as summarised in **Section 4** of this EAR and described within the TIS, the proposed improvements to the Pyrmont Parking Guidance System (PPGS) will provide drivers with accurate and timely real-time information. This will enable them to make informed decisions on car parking options, reducing unnecessary circulation of traffic in the area, and warning drivers early enough that they can choose an alternate parking facility if their first choice is full. This will further mitigate potential impacts of the Proposal on surrounding on-street parking.

9.15.5 Coach Parking

The TIS notes that most of the demand for private coach parking at The Star is associated with chartered tours bringing guests to special events and Lyric Theatre matinee performances. Mod 13 does not propose any increases to existing site uses (e.g. Lyric Theatre) that are likely to increase demand for coach parking.

Accordingly, no changes to the Mod 14 coach parking provisions are proposed.

9.15.6 Conclusion

As per the TIS conclusions, there is adequate car parking capacity within the basement car park to accommodate the cumulative increase in demand arising from Mod 14 and the non-tower components of Mod 13. In addition, there are 2,892 off-street and 1,200 on-street parking spaces within walking distance of the site that have capacity during business hours. The recent opening of the ICC Sydney with its two 24-hour parking stations has provided an additional 826 off-street parking spaces within walking distance of The Star.

A car stacker with access from the internal service road has been proposed to accommodate the parking demands arising from residents, visitors and hotel guests of the Ritz-Carlton hotel and residential tower.

This response is considered adequate to mitigate any adverse impacts on surrounding on-street parking for increased parking demand arising from the Proposal.

The site is well serviced by a number of public and active transport options, enabling visitors, patrons, staff, and residents to use these services to travel to and from the site. In addition, bicycle parking facilities are also proposed, which will contribute to a decreased reliance on car ownership for users of the site, further reducing parking demand on the site in relation to the proposed development.

Accordingly, parking demand is not anticipated to result in any adverse environmental impacts in relation to the Proposal, as well as the site and surrounding areas.

9.16 OPERATIONAL TRAFFIC IMPACTS

The TIS has assessed potential increases in trip generation as a result of the proposed development based on the following rates:

◆ **Tower component:**

- Hotel room trip generation rates based on observed rates for the Darling Hotel and Astral Hotel; and
- Residential apartment trip generation rates based on RMS standard trip generation rates;

◆ **Balance of Site works:** existing site trip generation rate per 100 m² of GFA.

The TIS concludes that, based on the Proposal to assign more importance on the Pyrmont Street approach/departure, the potential traffic impacts of Mod 13 will be spread more evenly across the adjacent network, and reduce the potential impacts at critical intersections such as Pyrmont Bridge Road and Murray Street.

The SIDRA analysis undertaken concludes that the surrounding road network will provide good levels of service (LOS C or better) in all peaks, with the exception of the intersection at Pyrmont Bridge Road and Murray Street, which drops to LOS D during the AM and PM peaks. The TIS notes that this is because the SIDRA results are network based results that consider down-stream and up-stream delay effects, and taken in isolation the performance at this intersection actually improves as there is less traffic.

Most of the forecast traffic growth will be on Pyrmont Street and Edward Street, with little or no growth forecast on Pirrama Road, Murray Street, and Jones Bay Road due to the proposed reassignment of traffic to Pyrmont Street.

The TIS has also assessed the performance of the road network and intersections in the context of future development surrounding the site, including:

- ◆ **100 Harris Street:** the proposed car park access at 100 Harris Street will be opposite the proposed Pyrmont Street car park entry as part of Mod 13. A cumulative impact assessment of the two intersections was undertaken using SIDRA under the combined AM and PM turning movements for the two sites. The assessment concludes that the combined driveway arrangement will operate at LOS C or better in the AM and PM peaks.

- ◆ **Other developments:** the other development in the vicinity of the site, including Harbourside and Darling Square will impact intersections at Murray Street, Union Street and Pyrmont Bridge Road. However, the Mod 13 strategy to assign more importance on the Pyrmont Street approach/departure (by incorporating a new Pyrmont Street car park entry), will reduce the current traffic impact on this intersection by 9% (AM), 12% (PM) and 10% (Off-Peak Periods).

Special Events traffic is addressed further below under **Section 9.18**.

9.16.1 Special Events Traffic

The Traffic Impact Statement at **Appendix J** notes that The Star holds several special events throughout the year that have local traffic impacts reflecting the day to day operation of a large entertainment precinct. Up to 5 special events each year are classified as Class 1-4 special events under the RMS Special Events Guidelines. These events require traffic management intervention and/or planning approval by road authorities, and include:

- ◆ ARIA Awards.
- ◆ AACTA's.
- ◆ Dally M Awards.
- ◆ NRL events.

Taxi queues were identified by the community as causing major disruptions to Pirrama Road during special events. The Proposal will address this issue through the relocation of the taxi rank internal to the site within Level B2.

Mod 13 does not propose to increase the frequency or impacts of special events generated by The Star, hence other than the taxi relocation works, no additional parking or traffic access provisions are proposed to address special events.

The TIS also notes that most of the demand for private coach parking at The Star is associated with chartered tours bringing guests to special events and Lyric Theatre matinée performances. Mod 13 does not propose any increases to existing site uses (e.g. Lyric Theatre) that are likely to increase demand for coach parking.

Accordingly, no changes to the Mod 14 coach parking provisions are proposed.

9.16.2 Conclusion

Operational traffic impacts relating to the Proposal have been considered and adequately addressed by Mott MacDonald in the TIA.

The proposed strategy to mitigate traffic impacts relating to the Proposal includes the provision of a new car park entry on Pyrmont Street to spread the demand more evenly across the road network and reduce the pressure on Pirrama Road. Additionally, the Proposal to relocate taxis into the service road will address the late-night operational issues caused by taxi queueing in Pirrama Road.

The TIS concludes that through the mitigation measures set out above, the local road network will continue to operate at existing or otherwise acceptable performance levels despite the additional traffic generated by Mod 13.

Mod 13 does not propose to increase the frequency or impacts of special events generated by The Star. Therefore, it is anticipated that the 5 Class 1-4 special events that will take place each year will not have an adverse environmental impact on the surrounding residential and other uses during the operational phase of the development, beyond that which has already been approved under MP08_0098 and subsequent modifications (including Mod 14).

Therefore, it is concluded that the Proposal will not have an adverse environmental impact on operational traffic flow within the local area.

9.17 LOADING DOCK AND SERVICE ACCESS

The SEARs require the modification application to address *“access arrangements for emergency and service vehicles, including loading dock arrangements.”*

The TIS at **Appendix J** as well as the Loading Dock Management Plan at **Appendix JJ** address these requirements of the SEARs. The key findings of these reports are summarised below.

As described in **Section 3**, several upgrades have been proposed as part of Mod 14 to the Jones Bay Road loading dock to increase storage and sorting areas to resolve the current bottleneck restraining cross-docking processes, and increase the loading dock capacity by up to 45 pallets per hour.

These upgrades are expected to be completed prior to Mod 13 works commencing. As part of Mod 13, further upgrade works are proposed to The Star Events Loading Dock to accommodate the additional capacity requirements associated with the Proposal.

The TIS at **Appendix J** concludes that combination of upgrades proposed in Mod 14 and Mod 13 will accommodate the additional service vehicle demands generated by Mod 13 because:

- ◆ The Star's main loading dock on Jones Bay Road is operating at 80% capacity despite allocating 2 loading bays to construction deliveries. This loading dock can comfortably process current delivery demands of the site;
- ◆ Loading bays 5 and 6 can also be reclaimed at the completion of Mod 14 construction works, which will increase available loading bays by 33%; and
- ◆ The Mod 14 capacity upgrades to the Jones Bay Road loading dock will provide for the future growth of The Star beyond Mod 14.

It is also proposed to increase the operating hours of The Star Events Centre Loading Dock to 24 hours during weekdays and 24 hours as required on the weekend and public holidays. These expanded operating hours will ensure that the requirements for deliveries to and pick-ups from the Ritz-Carlton Hotel, Residences, and The Star Events do not exceed the capacity of the loading dock, nor impede the flow of traffic through the service road and loading dock access.

The TIS notes that emergency vehicles will access the new Ritz-Carlton and Residential Tower via the new porte-cochere on Pirrama Road, with alternative access provided via the Star Events loading dock within the service road under the tower.

9.17.1 Mitigation Measures

A Loading Dock Management Plan has been prepared by Change Logic (**Appendix JJ**) to manage any potential impacts of the proposed works on the loading dock operations, and provides management measures under the following headings:

- ◆ Operational Policy;
- ◆ Delivery and Loading;
- ◆ Hours of Operation;
- ◆ Dock Traffic Management and Scheduling;
- ◆ Material Handling Equipment;
- ◆ Vehicle Routes;
- ◆ Pedestrian and Vehicle Safety;
- ◆ Work Health and Safety; and
- ◆ Security.

As discussed in **Section 11** it is proposed to update Condition F9 to reference this Loading Dock Management Plan and its recommendations.

9.17.2 Conclusion

The proposed upgrades to the Star Events Loading Dock, the extension of its operating hours, as well as the loading dock upgrades that have been proposed as part of Mod 14 accommodate that the increased demand for loading dock space generated by the Proposal.

In addition, it is anticipated that the management measures within the Loading Dock Management Plan will adequately mitigate any environmental impacts during the operational phase of the Proposal.

9.18 PEDESTRIAN AND BICYCLE ACCESS

The SEARs require the modification application to “include a Traffic and Transport Impact Assessment that...

- ◆ *Details sustainable travel initiatives for workers and visitors, particularly for the provision of end-of-trip facilities;*
- ◆ *Identifies pedestrian and cycle connections/circulation, particularly the cycle network identified in the Sydney City Centre Access Strategy;”*

In response to this requirement, as part of Mod 13, the following additional bicycle parking is to be provided as a sustainable travel initiative:

- ◆ 13 commuter bike lockers and 20 rental bikes are proposed within the Level B2 transport interchange works;
- ◆ 29 visitor bike racks to be located in groups at major entry points to the site; and
- ◆ 35 class 1 secure bike parking spaces at the Union Street/Edward Street entry to the site for staff.

These bicycle parking provisions will be in addition to the upgrades to bicycle parking proposed as part of Mod 14, which included 5 additional bicycle parking racks in the Level P2 secure staff bike parking facility, and 29 visitor parking spaces in the Level B1 and B2 carparks.

Several upgrade works are also proposed to Level B2 to improve pedestrian, cycle and public transport access to and from the site. The proposed works are shown on the Architectural Plans at **Appendix B**, the TIS at **Appendix J**, and are described in detail in **Section 9**.

These upgrade works will improve pedestrian and bicycle access to the light rail service within Level B2 of the site by:

- ◆ Improving sight lines and pedestrian linkages between Pirrama Road and the light rail station improving way-finding and passive surveillance;
- ◆ Providing a strong centralised pedestrian link between the light rail station and coach services, taxis, and Pirrama Road;
- ◆ Improving pedestrian experience, safety, and movement by providing upgrades to the finishes of the light rail surrounds and incorporating a large raised pedestrian crossing of the service road; and
- ◆ Improving active transport options by providing commuter bike lockers and rental bikes close to the light rail station platform and Pirrama Road forecourt.

The proposed works to the Jones Bay Road frontage will also include an upgrade to the existing (underutilised) arcade entrance, and new uses within the arcade to activate this area of the site. These works will further enhance the connectivity of the site by providing a new link through the site to the local pedestrian network and the public domain spaces beyond as shown in **Figure 68** below.

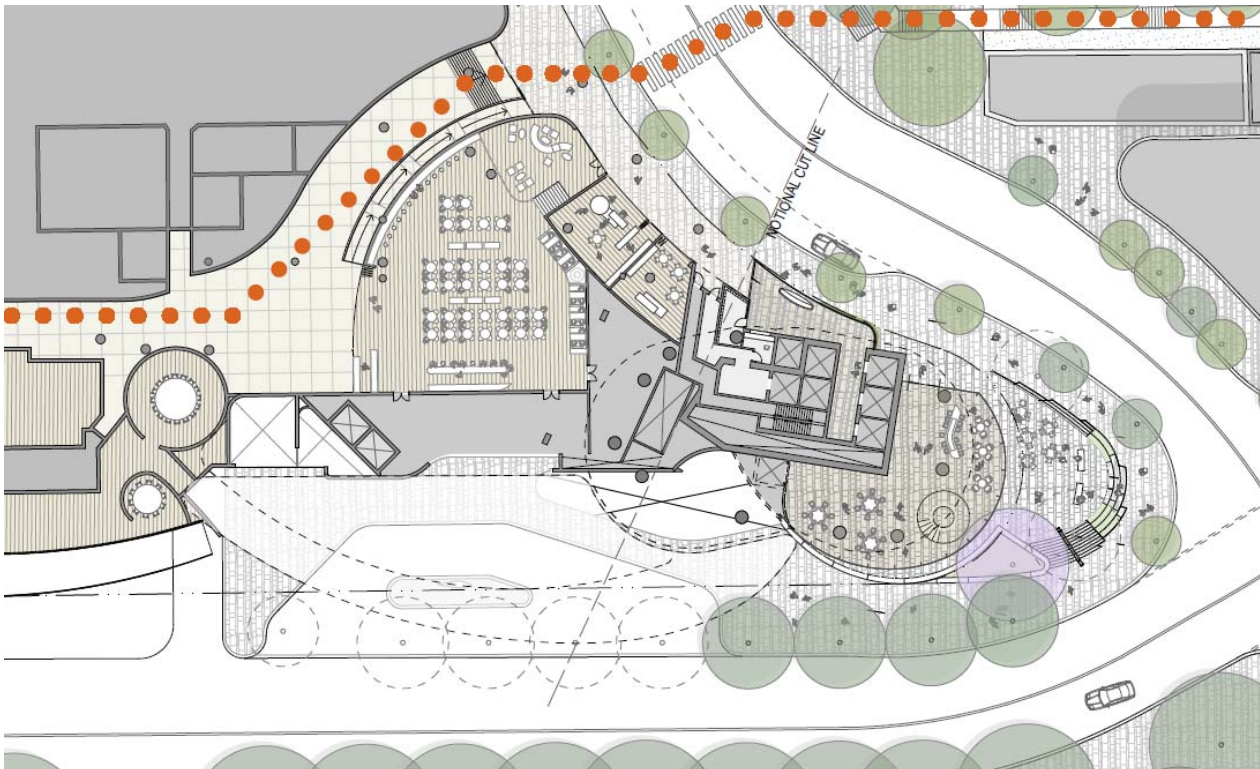


Figure 68 – Proposed Site Link through the site to Jones Bay Road and beyond

MITIGATION MEASURES

To support the proposed transport interchange improvement works and additional bicycle parking, a draft Green Travel Plan has been prepared and is provided at **Appendix WW**. This draft Green Travel Plan will be updated and submitted to DP&E for approval prior to the commencement of construction of the relevant stage and to be implemented prior to occupation of the relevant stage. This Green Travel Plan outlines the provision of end-of-trip facilities and a series of initiatives to improve the sustainable travel choices for staff and visitors travelling to The Star.

CONCLUSION

The proposed works will improve the pedestrian and bicycle access to and from the site, and improve the site's connection to the CBD along the Pyrmont Bridge and Darling Drive cycleways that are identified as part of the strategic cycleway network in the Sydney City Centre Access Strategy.

The proposed Level B2 Interchange improvement works will support sustainable transport by making access to and from the Light Rail station legible and easy to access. These works will be complemented by the improvement in bicycle parking options on the site, which will also enhance the mode share of sustainable transport options to and from the site.

9.19 AIRSPACE OPERATIONS

Building developments in the Pyrmont area are impacted by the protected airspace restrictions defined for Sydney Airport.

In March 2017, Thomson GCS submitted an Aviation Application to Sydney Airport Corporation Limited (SACL) to:

- ◆ Allow the proposed tower and crane operations to penetrate the Sydney Airport OLS; and
- ◆ Raise the RTCC Contours above the site to at least 285m AHD to accommodate crane activities. This can be achieved by extending the 335m RTCC contour to the west by approximately 0.3 nautical miles.

An Airspace Application and Assessment prepared by Thompson GCS supported the Aviation Application, and has been

provided at **Appendix S**.

The key findings of the Airspace Assessment are as below:

- ◆ The 'Procedures for Air Navigation Services-Operations' (PANS-OPS) surface above the site is above 285m AHD – a permanent obstruction is not permitted to penetrate the PANS-OPS surface;
- ◆ The 'Radar Terrain Clearance Chart' (RTCC) is 244m AHD – this is the lowest critical surface and establishes the maximum height for building development and crane operations;
- ◆ The 'Obstacle Limitation Surface' (OLS) is 156m AHD – permanent obstructions may be approved to penetrate the OLS under the *Airports (Protection of Airspaces) Act 1996* (Airports Act);
- ◆ The proposed tower (at 237m AHD) will penetrate the OLS by 81m, but will remain at least 48m below the PANS-OPS surface and 7m below the RTCC; and
- ◆ The construction cranes (at a maximum height of 285m AHD) will penetrate the OLS by 129m and the RTCC by 41m AHD, but will remain below the PANS-OPS surface.

RTCC: As the crane operations will penetrate the RTCC, approval is needed to raise the height of the RTCC over the site to enable crane operations to take place.

OLS: Given the construction cranes will penetrate the OLS by 129m, the Proposal will require approval by the Department of Infrastructure and Regional Development (DIRD) under the Airports Act.

On the 22nd of March 2018, the Director of Airspace Protection Aviation and Airports Division, as the Secretary's Delegate for the purposes of the Regulations, issued approval for the controlled activity for the intrusion of the building in the prescribed airspace for Sydney Airport to a maximum height of 237m AHD.

In making the decision, the Delegate took into consideration the opinions of CASA, Airservices Australia and SACL and the following conditions were attached to the approval:

- ◆ The building must not exceed a maximum height of 237 metres AHD, inclusive of all lift over-runs, vents, chimneys, aerials, antennas, lightning rods, any roof top garden plantings, exhaust flues etc.
- ◆ The building must be obstacle lit by medium intensity steady red lighting during the hours of darkness at the highest point of the building. Obstacle lights are to be arranged to ensure the building can be observed in a 360 degree radius as per subsection 9.4.3 of the Manual of Standards Part 139 - Aerodromes (MOS).
- ◆ The Proponent must ensure obstacle lighting arrangements have a remote monitoring capability, in lieu of observation every 24 hours, to alert SACL reporting staff of any outage. For detailed requirements for obstacle lighting monitoring within the OLS of an aerodrome, refer to subsection 9.4.10 of the MOS.
- ◆ The obstacle lighting must be maintained in serviceable condition and any outage immediately reported to the aerodrome operator.
- ◆ The Proponent must advise AirServices Australia at least three business days prior to the controlled activity commencing.
- ◆ Separate approval must be sought under the Regulations for any construction equipment (i.e. cranes) required to construct the building.
- ◆ On completion of construction of the building, the Proponent must provide (in writing) a report from a certified surveyor on the finished height of the building to SACL's Airfield Design Manager.

Overall, the crane exceedance will be periodic and is considered acceptable. Mod 13 will not present a safety risk or impact to other aircraft operations in the proximity of this area, as confirmed by Airservices at Sydney Airport, the Civil Aviation Safety Authority and the approval from DIRD. Given the conclusions of the Airspace Assessment, no adverse impacts on the operation of Sydney Airport are anticipated as a result of Mod 13.

9.20 SYDNEY OBSERVATORY SKYVIEW

A Sydney Observatory Sky View Loss Assessment has been prepared by George Georgevits (UNSW Global Pty Limited) is provided at **Appendix U**.

This report assesses the possible loss of sky view from Sydney Observatory (north and south domes) as a result of the proposed Mod 13 works.

It concludes that the proposed tower will have no observational impact on the operations of the Sydney Observatory because:

- ◆ The presence of the trees that obstruct the view of the Star Tower from Sydney Observatory;
- ◆ The sky objects of interest nominated by the observatory will not pass through the block of sky obstructed by the Star Tower;
- ◆ In addition, there are literally hundreds of other interesting objects in the night sky that are suitable for viewing with a moderate size telescope; and
- ◆ At the time of year when the objects of interest are low in the sky, the observatory could, and in order to provide the best possible viewing experience, should choose objects that are much better placed in the sky for viewing (i.e. at higher elevation).

Accordingly, no Sky View Impacts are anticipated as a result of works proposed as part of Mod 13.

9.21 HISTORIC HERITAGE: NON-ABORIGINAL

The SEARs require the preparation of “*Historic Heritage and Aboriginal Heritage Impact assessments*” to address potential impacts of the Proposal on the following:

- ◆ The SELS building located in the north-western corner of the site and listed as Item 1259 under SLEP 2012;
- ◆ The Pyrmont Conservation Area (Item C25) and associated individual items of significance located therein; and
- ◆ Locally listed heritage items within the visual catchment of the Site

A HIS has been prepared by Urbis in accordance with the NSW Heritage Branch guideline ‘*Assessing Heritage Significance*’ (2001) as well as the Australia ICOMOS Burra Charter 1999 (revised 2013) (refer to **Appendix P**). The HIS process included consultation with key stakeholders including the NSW Heritage Council, the City of Sydney and the Pyrmont History Group and has assessed the potential for heritage impacts in accordance with the heritage provisions of the SLEP 2012 and the SDCP 2012.

9.21.1 Sydney Electric Lighting Station (SELS) Building

As outlined in **Section 3.5** and shown in **Figure 6**, the SELS building is located in the north-western corner of the site bounded by Jones Bay Road, to the north and Pyrmont Street to the west and built elements of The Star to the east and south.

The SELS building is the only remaining element of the former Pyrmont Power Station. The original building elements were constructed in circa 1904 in the typical Federation Arts and Crafts style of architecture with later additions between 1904 and 1922 reflecting the stripped Federation Character. A detailed history of the SELS building and Pyrmont Power Station development at the site is provided in section 4.2 of the HIS provided at **Appendix P**.

Under SLEP 2012, the SELS building (referred to as Former Pyrmont Power Station Administration Building) is listed for both external and internal building fabric.

The HIS prepared by Urbis has undertaken an assessment of significance in accordance with the provisions of the Burra Charter. The assessment of significance has determined the following:

- ◆ Historical Significance as it is the only remaining structure of the Former Sydney Electrical Lighting Station which provided power to light Sydney's first electric street lights
- ◆ Associative Significance due to the role of prominent City Architect and Surveyor Robert H Broderick in its design;
- ◆ Aesthetic and representative significance as the building is a good example of the Federation Arts and Craft style of architecture and retains a number of key features of the Art Nouveau period. The assessment notes that the aesthetic significance has been partly degraded due to surrounding development; and
- ◆ Rarity as it is a largely intact Civic building incorporating Art Nouveau elements with associated cultural significance related to the broader former use of the site as a power station (now demolished).

Mod 13 proposes to undertake construction of a new tower in the north-eastern corner of the site combined with modifications to external building elements along the eastern and western frontages. Works within the immediate context of the SELS building are shown in **Figure 69** and include public domain works that will improve accessibility of the building. Mod 13 does not involve alteration to the internal fabric of the SELS building. Minor works will be undertaken to the exterior façade involving the installation of LED lighting.

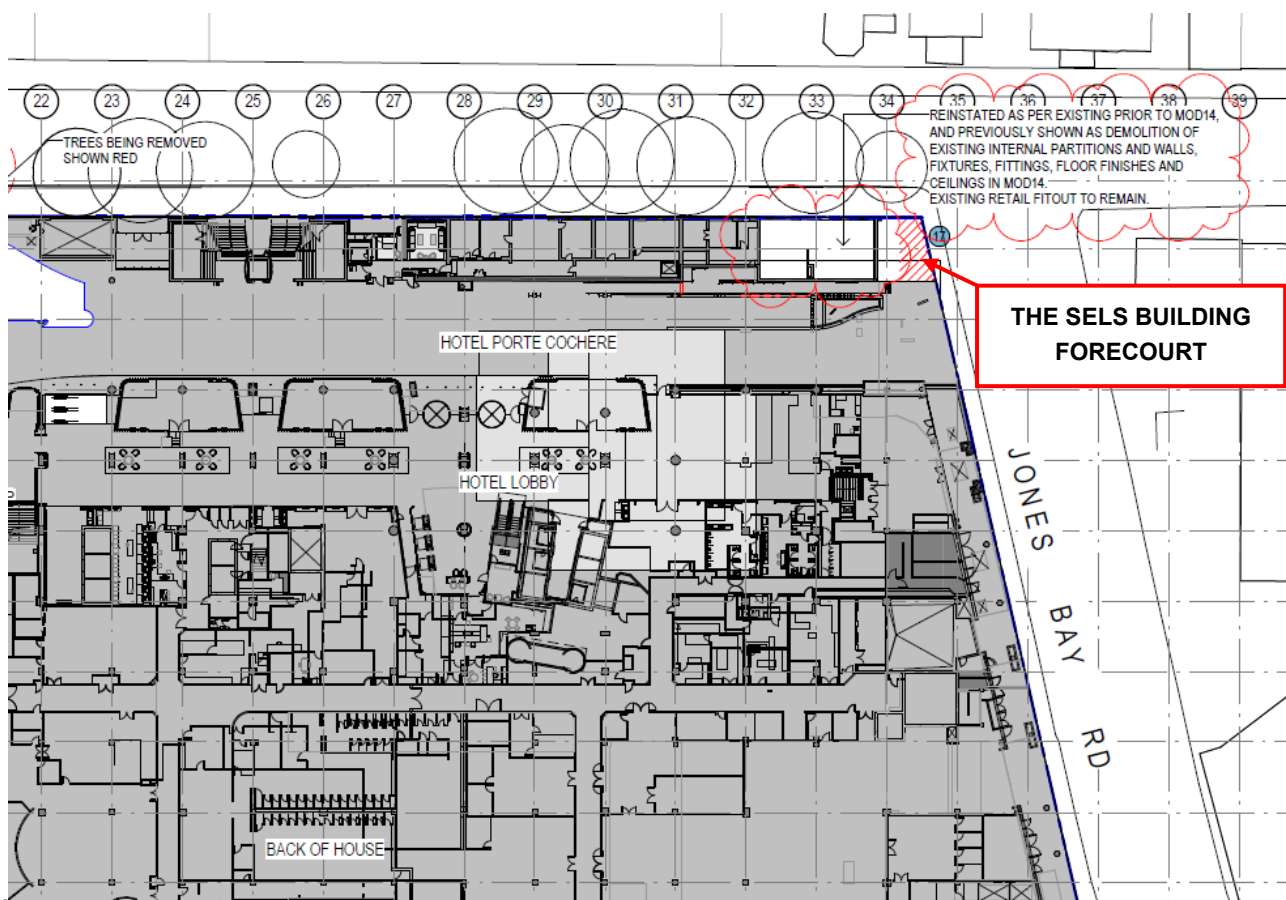


Figure 69 – Context of SELS Building Works

Accordingly, the potential for impact arising from Mod 13 is limited to contextual impacts associated with a change in the visual setting of the building influenced by the construction of the tower and the minor public domain works. The HIS has concluded the following:

- ◆ The aesthetic setting of the SELS building is unlikely to be affected by the introduction of soft landscaping to the public domain. Conversely these works are likely to enhance street presentation and the setting of the heritage item. It was concluded that these works will have no negative heritage impacts;
- ◆ The tower element while visible along Pyrmont Street, Jones Bay Road and behind the SELS building would not be a focal point (refer to view 7 analysis in the HIS, **Appendix P**). The siting of the tower to the north east of the SELS building, separated by existing buildings including the Astral Hotel ensures that no existing views to or from the

SELS building would be interrupted. Urbis conclude that the SELS building will remain a dominant visible feature in the streetscape and the proposed tower will have impact on its setting.

9.21.2 Pymont Conservation Area and Associated Items

As a consequence of Pymont's early role a working class industrial and port community the area immediately surrounding the site of The Star contains a wide range of individually list heritage buildings and the Pymont Heritage Conservation Area, listed under SLEP 2012.

The Pymont Conservation Area (C52) is located to the southwest of the site (refer to **Figure 70** – shown red and hatched) and contains a total of 14 individually listed heritage items (shown brown in **Figure 70**). The Conservation Area is recognised as a good example of mid to late Victorian working class community made up of both residential and commercial building forms which remain largely intact and make a positive contribution to the streetscape.

As shown in **Figure 70** only a small extent of the Conservation Area directly adjoins the site, this extent also contains Heritage Item I1262 a group of three cottages and Item I1273 the Commonwealth Bank of Australia building and terrace group.

Heritage items recorded in the broader context of The Star range from groups of terrace housing to former industrial buildings, warehouses, hotels and Civic buildings resulting in a diverse mix of buildings forms and scales.

The HIS concludes that the addition tower will, in the context of the current scale and typology, alter the character of the peninsula to a degree. Notwithstanding this, the HIS notes that the significance of the heritage items in Pymont are not considered to be vested in a low-scale or fine-grain setting and on balance the change in character is acceptable.

The potential for significant impact is avoided by Pymont's unique built form and heritage context that is not exclusively defined by fine grain residential terraces. Instead it is an area characterised by a mix of large scale industrial sites. This pattern of development has left a legacy of large and small development sites intermixed creating a mix of typologies and forms within a small geographic space.

As the early industrial buildings (including the Pymont Power Station) have been redeveloped, the remnant large sites have facilitated larger scale development on the peninsula. Examples of this include Jacksons Landing which is visible from the intersection of Harris Street and John Street, and Harris Street and Scott Street. Both of these intersections have a concentration of heritage listed items whose broad settings are characterised by higher scale development.

Given the large-scale development that has been approved or is under consideration in the precincts surrounding Pymont, including Darling Harbour and the Bays Precinct, the fine-grain character within the Pymont Peninsula will inevitably exist in the context of larger-scale development.

Critically the HIS also notes that the proposed tower will be in an area where early development was not historically exclusively small-scale and where higher density development is already evident, having been facilitated by the impact of early industrial buildings on the subdivision patterns.

The potential for impact of the Proposal on the setting of the surrounding heritage items within Pymont and Pymont Heritage Conservation Area was assessed from a total of 23 different vantage points and along view lines, these are shown in **Figure 70** and considered in detail in **Table 27**.

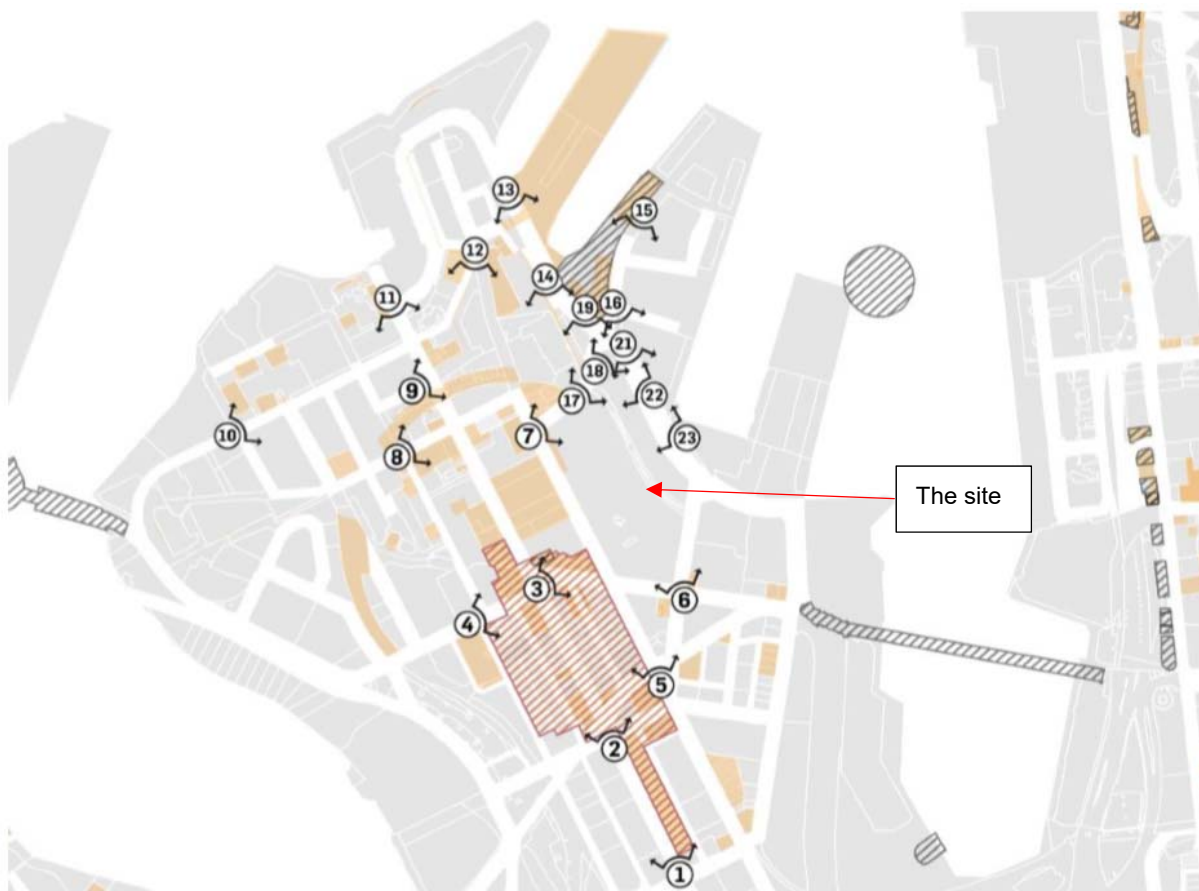


Figure 70 – Location Context of Heritage Items

Table 27 – Summary of assessment of heritage context impacts

Assessment Focus	Map ID	Key heritage features	Potential Impacts	Conclusion and Mitigating Measures
Pymont Conservation Area	View 1-5 (inclusive)	<ul style="list-style-type: none"> ◆ Preservation of views, setting and solar access to Union Square (formed by the part closure of Union Street) and contains Pymont war memorial ◆ Visual setting of the conservation area generally. 	<ul style="list-style-type: none"> ◆ The essential contemporary character of the setting of Union Square would not be changed as a result of the proposed tower. As the tower would be located on the opposite side (north) of the existing Astral Hotel, it would not change the backdrop against which the roof forms of the items along the northern side of Union Square would be read. ◆ The Darling Hotel “corners upgrade” to the corner of Union Street and Pymont Street would be visible from within the adjacent conservation area. The works would rationalise the corners and the only additional element constitutes a small awning structure within the setback from Pymont Street 	<ul style="list-style-type: none"> ◆ Given the distance between Union Square and the tower, and the existing development in between, the tower would not define the immediate context of Union Square. The proposed tower would have no negative impact on the setting of Union Square ◆ This would have no impact on the existing building massing and would be in keeping with its established character. There is no potential for the upgrade to detract from the setting of Union Square. ◆ No mitigation measures were required
Pymont Bridge	View 6 Heritage Items: I1213, I1244, I1245, I1255, I1256, I1266, I1274, I1275, I1276, I1277	<ul style="list-style-type: none"> ◆ A total of 10 locally listed items were considered in the assessment corner shop with residence, former warehouses, the Pymont Bridge and New York Hotels, and groups of terrace houses ◆ The setting of these items is defined by the mixed character of the surrounding building stock. The items exist in the broad context of the CBD, which is highly visible from many areas, and in the context of higher density development on the harbour 	<ul style="list-style-type: none"> ◆ Where visible from the corner of Edward Street and Union Street, the proposed tower would constitute a distant additional focal point which does not dominate the presentation of the items to their respective streetscapes. ◆ The Darling Hotel Corner upgrade to the corner of Edward Street and Union Street would be visible in the context of some heritage items in this area. Almost all proposed elements are located behind 	<ul style="list-style-type: none"> ◆ The works would not change from the existing scale or character of the intersection. ◆ No mitigation measures necessary.

within the peninsula including the multi storey developments at 60 Union Street and 50 Murray Street.

existing facades.

- ◆ The existing heights of the individual elements would be retained and as such the building would maintain the existing relationship with the early fabric surrounding the intersection in terms of scale.

View along Pymont Street

View 7
Heritage Items I1261, I1259, I1225

- ◆ A total of three (3) locally listed items were considered. The items include
- ◆ Views to listed heritage items along Pymont Street

- ◆ Views along Pymont Street are oriented away from the tower element given the alignment of Pymont Street. The tower would not be a focal point in these views. Although the tower would be visible behind the SELS, the siting of the tower would ensure that no existing views to or from the SELS are obstructed.
- ◆ The tower would be located behind the existing Astral Hotel which forms the existing backdrop of the SELS and defines the existing context along with the Watermark Tower at 2 Jones Bay Road.

- ◆ The SELS would remain dominant in the streetscape and the tower would not have a detrimental impact on its setting.
- ◆ No mitigation measures are necessary.

View 8

Eastward along John Street.
Intersection of Harris and John Street

- ◆ There is a total of 16 locally listed heritage items located within the vicinity of the intersection of Harris and John Streets.
- ◆ The view looking eastward along John Street has been identified as that of most importance, this view is dominated by the Former Pymont Public School (local heritage item) with views terminating at the Barangaroo Towers in the distant views.
- ◆ The former Pymont Public School (including a prominent tower element)

- ◆ The proposed tower would constitute an additional focal point in this view and would be above the height of the tower associated with the Former Pymont Public School.
- ◆ Other tall buildings are evident in the view, including Barangaroo towers. However, the new tower would be closer to the heritage items on John Street and therefore more prominent in this view. As a consequence, there is, some heritage impact on the setting and visual curtilage of the Former Pymont Public School from this view point.

- ◆ The use of glass cladding when viewed against the masonry materials that characterises the former Pymont Public School contribute to a visually recessive tower form
- ◆ The curved form of the tower also differentiates and softens the tower from the strong angles of the former Pymont Public School assisting in retaining its dominant streetscape presentation.
- ◆ Mitigation measures are incorporated into the design and material selection. No further mitigation is considered necessary.

Harris and Scott Street	Views 9 and 11	<ul style="list-style-type: none"> A total of 8 locally listed heritage items have been considered. Items reflect a mix of terracing houses, a hotel and former CSR store buildings. Primary views including heritage items are from Scott Street -predominantly single storey and surrounded by four + storey mixed use developments 	<ul style="list-style-type: none"> The tower would be visible in the setting of these heritage items from the west. However, the tower will not be visible from the primary views to these items, which are to the north from Scott Street towards the primary facades. The tower would be an additional element in what is already a non-significant setting and would be separated from the heritage items by existing high density contemporary residential development. 	<ul style="list-style-type: none"> No mitigation measures required as the significance of these heritage items is not dependant on their setting retaining a low scale character.
north west of Pymont Peninsula Items: I1207, I1208, I1209, I267, I268	View 10	<ul style="list-style-type: none"> A total of five (5) locally listed items were assessed including former CSR buildings used as a cooperage, office, gate house, laboratory and tablet house. 	<ul style="list-style-type: none"> These heritage items are already viewed in the immediate context of Jacksons Landing and the high density residential development along the western side of the Pymont Peninsula. The proposed tower would not dominate the setting of the heritage items in this area given it is on the opposite site of the peninsula and the existing high-density development in the immediate vicinity of the heritage items 	<ul style="list-style-type: none"> The setting of the existing heritage items is unlikely to be affected. No mitigation measures are necessary.
Intersections of Bowman Street and Point Street	View 12 Heritage Items I1254, I1210, I1253,	<ul style="list-style-type: none"> A total of 4 locally listed items have been assessed. The items include terrace and cottage houses, a residential flat building and a hotel 	<ul style="list-style-type: none"> The tower would be partly visible in the backdrop to these heritage items when looking south. The setting of the items (Point Street) is heavily vegetated with mature trees it is unlikely that new development in the 	<ul style="list-style-type: none"> The setting of the heritage items would not be compromised, and the existing vegetation would remain the focal point in this view. No mitigation measures necessary.

background would be prominent.

**Heritage
Foreshore**

Views 13 to
19 (inc) and
Views 21 –
23 (inc)

- ◆ The foreshore of the Pyrmont Peninsula is characterised by buildings which historically had industrial uses (such as the CSR building to the north) and/or functional relationship to the harbour (including Jones Bay Wharf and the Naval Warehouse on Pirrama Road).
- ◆ The Pyrmont Skyline is defined by contemporary buildings including those within The Star and Jacksons Landing. The only impact on these views would be the changed scale of the backdrop to the heritage items and an additional focal point in the frame. Notwithstanding, it is considered that the contemporary fabric would be easily discernible as such behind the low scale building stock and would not compromise the legibility of the latter.
- ◆ The distinctive design of the ribbon would be visible in the wider context of the identified foreshore heritage items to the west of Darling Harbour including Jones Bay Wharf and the Naval Warehouse on Pirrama Road due to the open parkland between The Star and the harbour. However, it would be viewed against the back drop of the existing contemporary development at The Star.
- ◆ The location of the site, setback from the foreshore, means that although the tower would be read in the same context as these items it would not obscure any existing views to these waterfront items from the harbour/public domain.
- ◆ The proposed tower would not impact an early skyline behind the foreshore heritage items including Jones Bay Wharf and the Naval Warehouse on Pirrama Road as the
- ◆ The ribbon and the associated waterfall elements are not located in close proximity to any heritage items. As such, it would not detract from the primary focus' of the view which constitutes the fabric around the foreshore and the harbour itself

Pymont Bridge	N/A	<ul style="list-style-type: none"> ◆ A state listed heritage item 	<ul style="list-style-type: none"> ◆ The visual impact assessment (VIA) completed by Architectus has assessed the potential impact as moderate to high; ◆ The HIS concludes that the proposed tower development will be visually prominent in the context of the bridge and be an additional focal point. 	<ul style="list-style-type: none"> ◆ There are a number of high rise developments within the visual catchment of the bridge and while the Proposal will contribute a new focal point it will not prevent appreciation of the bridge from the water. ◆ Likely future views westward may start to reflect those eastward, with visual enclosure by tower building elements. ◆ The bridge will remain visually prominent against the backdrop of the Harbour. ◆ No mitigation measures are necessary.
Martin Place	N/A	<ul style="list-style-type: none"> ◆ Identified under the Central Sydney Planning Strategy 2016 – 2026 as having a “Protected Sky Silhouette” ◆ The highly significant fabric in Martin Place constitutes the cenotaph at the western end of Martin Place. 	<ul style="list-style-type: none"> ◆ The top of the tower would be visible from Martin Place east (the visual impact assessment identifies the tower as being moderately visible from Martin Place near Macquarie Street). ◆ The tower will not be visible from the location of the cenotaph 	<ul style="list-style-type: none"> ◆ The proposed tower would be discernible as new fabric, diminutive in scale in comparison to the buildings which address Martin Place, and would only be visible from some parts of Martin Place. ◆ The Proposal will have no direct impact on Martin Place, its setting or elements of significance. ◆ No mitigation measures are necessary.

Taking into account the above, the HIS concludes that the Proposal is acceptable from a heritage setting perspective owing to:

- ◆ the extensive large scale contemporary multi-storey developments that are present on the Pyrmont Peninsula provide a current and future context that would support the integration of the tower element;
- ◆ the ribbon and the associated waterfall are not located in close proximity to any heritage items; and
- ◆ the proposed balance of site works is minor and would not change the character of The Star or have a detrimental visual impact on the identified heritage items.

9.21.3 Mitigation Measures

Overall the Proposal is unlikely to cause direct impact on the identified heritage item, the SELS building or the broader contextual setting of the site, containing a range of individually listed heritage items and the Pyrmont Conservation Area.

The siting and design of the tower was informed by locational constraints and sought to mitigate visual impact on the heritage character and individual items of the immediate context of the site. In particular, the following decisions were made in relation to the tower through the design development phase to ensure the preservation of the heritage character of the area:

- ◆ The entrance to the Ritz Carlton Hotel located so as to ensure the retention of the existing building envelope of The Star and is generally in keeping with its existing character. The contemporary form constituting the ground floor awning over the entrance is of an appropriate scale and has an appropriate separation from all identified heritage items that it would not detract from their setting.
- ◆ The Proposal includes an appropriately expressed podium. The podium is expressed both through form and materiality.
- ◆ Sandstone characterises the area. It is visible in the natural environment including in the escarpment to the north of the site, and in the built environment including in the Art Nouveau details of the SELS. The use of sandstone in the tower podium is sympathetic to the character of the area and ensures that a relationship between the old and new fabric is retained. Further, it is proposed to use either sandstone or profiled aluminium in a sandstone colour in the spandrel panels on the tower. These spandrel panels would sympathetically reduce the void to solid ratio comprised in the tower.
 - ◆ The podium element is proposed to be clad in a sheer glass wall. Sculptural timber mullions are proposed to reduce the void to solid ratio to articulate the façade and reduce visual impact on the proximate items.
 - ◆ There is a substantial amount of vegetation proposed to the development overall in the form of 'green-belts'. These belts further articulate the façades, emphasise the podium element and constitute a sympathetic neutral element in the context of the contemporary fabric in an early setting
 - ◆ The ribbon and the associated waterfall, located along the Pirrama Street elevation are separated from the areas of identified heritage and conservation value thereby limiting the potential to cause direct or indirect impact to the setting.
 - ◆ The proposed balance-of-site works are minor and would not change the character of The Star or have a detrimental visual impact on the identified heritage items.

Notwithstanding the above, to ensure the preservation of the heritage character a Conservation Management Plan (CMP) has been developed for the SELS building, this includes guidelines to inform the installation of external lighting to the façade of the SELS building. The CMP includes explicit provisions to limit intrusion to the building fabric requiring reuse of existing services and fixtures where possible, where new fixtures are required these should be made into mortar and avoid masonry elements.

9.21.4 Conclusion

The proposed works do not affect the visual integrity or interpretation of the SELS Building or proximate heritage items. The design and siting of the proposed tower, ribbon and associated waterfall elements serve to retain existing views and vistas to and from the heritage item by generally maintaining the same setback at the existing fabric to the north-east corner. Moreover, the slender floorplate and tower form ensure the retention of views around the heritage item.

The key conclusions and observations of the HIS are summarised below:

- ◆ It is considered that the construction of a tower on the site is acceptable from a heritage perspective as the tower development is in an area strategically accepted for growth and the appropriate detailing and mitigation measures developed for the proposed tower will be implemented as outlined below;
- ◆ The following design decisions serve to retain existing views and vistas to and from the identified heritage listed items in the vicinity:
 - The podium would maintain generally the same setback at the existing fabric to the north-east corner of the site. As such, views to the state listed warehouses (heritage item – 1251) opposite from Pirrama and Jones Bay Road would not be obstructed (in accordance with DCP 3.9.5 (3)(d));
 - The bottom of the tower is significantly thinner than the top. The reduced floorplate best ensures the retention of views around the proximate heritage items;
 - The elliptical design of the tower further maximises visual access around it; and
 - The form of the tower, mean that from the south west (Union Square and Pymont Conservation Area) the building would appear slimmer than from the west. This is considered appropriate in terms of minimising impact on views towards the peninsula from the harbour

9.22 ABORIGINAL AND HISTORICAL ARCHAEOLOGY

The SEARs require the preparation of '*Historic Heritage and Aboriginal Heritage Impact assessments.*' In response, an Aboriginal and Historical Archaeological Assessment (AHAA) has been prepared by Urbis and is provided at **Appendix O**.

As summarised below, the AHAA assesses the archaeological potential of the site based on a review of the history of the area, previous archaeological studies and analysis of past disturbances of the site.

The AHAA states that the construction of The Star, including its basement levels, as well as the previous use of the site as the former Pymont Power Station, have resulted in severe disturbance across the entire site.

Aboriginal Cultural Heritage: Based on the previous disturbances, the potential for any intact Aboriginal archaeological sites or objects where works are proposed as part of Mod 13 is assessed as very low to nil.

Historical Archaeology: The report references a previous historical archaeological investigation of the site which was undertaken to accompany the Major Project Application MP08_0098. This investigation concluded that it is possible, though unlikely, for evidence of historic structure to still exist on the site, particularly being sub-surface features such as wells or cesspits. However, the report states that, given the extent of disturbance that has occurred on site since 1994, it is now considered highly unlikely for any evidence of historic structure to still exist.

CONCLUSION

The AHAA concludes that the site is considered to have very low to nil archaeological potential; Mod 13 is highly unlikely to result in any further archaeological impacts on the site, therefore, no further archaeological assessments or investigations are recommended to be undertaken for the site.

Given the conclusions of the AHAA, the Proposal is considered acceptable in terms of Aboriginal and Historical Archaeology.

9.23 SAFETY AND SECURITY

A Crime Prevention Through Environmental Design (CPTED) Assessment has been prepared by Urbis, and is provided at **Appendix N**.

The CPTED Assessment has considered the existing security and surveillance measures on the site, relevant policies and guidelines, local crime statistics, as well as the architectural plans for the proposed development, and makes the following observations:

- ◆ The design of the built form has considered CPTED principles by promoting natural surveillance, inhabited and well-lit internal spaces activated for most of the day and night, and inclusion of a neighbourhood centre.
- ◆ Security is provided onsite 24 hours a day, 7 days a week.
- ◆ Pyrmont is experiencing lower crime trends per 100,000 population than the suburb of Sydney and the City of Sydney. The major exception, however, is betting and gaming offences.
- ◆ The Safer Nights Out at The Star (May 2016) outlines protective factors that contribute to reducing anti-social behaviour and alcohol fuelled violence.

The proposed works at the Level B2 Transport Interchange and the Pirrama Road façade will open up views and pedestrian linkages between Pirrama Road and the light rail station. The proposed formalisation of the taxi rank within the service road, along with the remaining upgrade works at this level will help activate the light rail station and improve passive surveillance at Level B2 and the Pirrama Road public domain.

The proposed ground floor activation along Pirrama Road and Jones Bay Road comprising restaurants, hotel lobby, Neighbourhood Centre, residential lobby and retail uses will also improve pedestrian safety through passive surveillance.

All of these above features contribute to and enhance the security of the site.

In addition, several improvements at the ground plane of The Star are proposed, which will improve pedestrian access and connectivity. These include the use of distinctive façade architecture and materials (such as the vertical sculptural elements at the Pirrama Road arrival point, the sandstone awning for the Ritz-Carlton porte-cochere, and the glass and timber finishes for the neighbourhood centre), which will aid in defining the uses and improve pedestrian wayfinding.

The CPTED Assessment concludes that the proposed development will deliver of a safe and secure environment because:

- ◆ It will increase the natural and casual surveillance opportunities over the public domain areas;
- ◆ It will enhance line of sight along Pirrama and Jones Bay Roads;
- ◆ It will provide an opportunity to ensure that suitable lighting, technical supervision and access control mechanisms can be integrated into the new development and redeveloped areas;
- ◆ It will provide strong ownership cues, particularly for the local community, and provide an increase in vibrancy and territorial reinforcement;
- ◆ The introduction of the 6-star hotel will increase the perception of the area as a high quality safe environment; and
- ◆ It will enable future access control provisions to be effectively implemented to ensure the security of future visitors, residents, and employees to the site.

9.23.1 Mitigation Measures

The CPTED Assessment provides a number of recommendations to operations at The Star post Mod 13 works to expand upon existing good practices and reduces opportunities for crime, including:

- ◆ Installation of CCTV throughout all external and internal publicly accessible areas;
- ◆ All lighting to be implemented as per the requirements listed in **Section 5.7** of the Site-Wide Lighting Management Plan (**Appendix T**) to enhance security and safety;

- ◆ Design surveillance measures at the access points to the car stacker and inside the car stacker to ensure the safety of this area;
- ◆ Provide landscaping that does not hinder line of sight and perceptions of safety, particularly in areas where there is little natural surveillance (such as Jones Bay Road);
- ◆ Undertake consultation with Sydney Harbour Foreshore Authority and NSW Police Local Area Command on linkages of CCTV and reporting of incidents;
- ◆ Update Operational Plans of Management to include the redeveloped Ribbon, hotel and Neighbourhood Centre;
- ◆ Ensure that there are adequate and appropriate mechanisms and procedures in place to control access to the different users of The Star;
- ◆ Ensure clear signage and way finding to publicly accessible areas;
- ◆ Build upon the Draft Neighbourhood Centre Plan of Management;
- ◆ Staff and security to continue to report non-domestic assaults to police to continue to enhance the reputation of The Star to reduce fear and perceptions of crime; and
- ◆ Update Operational Plans of Management to include the hotel, Ribbon, Sky Terrace, and Neighbourhood Centre.

All of these recommendations have been implemented as part of the Proposal.

9.23.2 Conclusion

It is anticipated that the Proposal will have a positive impact on the safety and security of the site and the surrounding areas provided the recommendations contained in the report are adopted during the detailed design, construction and operation of the Proposal and the site a whole.

9.24 OPERATIONAL PLAN OF MANAGEMENT

SEGL has an effective Operational Plan of Management established which includes procedures to minimise harm and impact to people internal and external to the site. This Operational Plan of Management will be updated to include Mod 13 works, and will be provided to DP&E prior to issue of the OC for tower elements

A Plan of Management for the Neighbourhood Centre has been prepared to address a comprehensive range of management issues and provide requirements, guidelines and strategies for each of the key issues, to ensure that the Neighbourhood Centre retains its importance as an active space for the whole community. The Plan of Management is included at **Appendix UU**, addresses management objectives and strategies as well as methods to monitor the implementation of the Plan of Management.

The Neighbourhood Centre will be operated and managed by SEGL, in conjunction with an advisory panel comprised of local community members. The advisory panel will comprise approximately six members who will represent local Pyrmont community groups, local residents and the local working community.

On a day-to-day basis, the Neighbourhood Centre manager will manage, coordinate and market events and activities and enhance the social interaction with the community.

9.25 STRUCTURAL

TTW has prepared a Structural Brief addressing the proposed ribbon expansion, and WSP has prepared a Structural Report addressing the proposed tower development. These reports are provided at **Appendix NN** and **Appendix OO**.

These reports provide recommendations in terms of construction materials and techniques to isolate adjacent structures during the demolition and construction phases of the development.

TTW's Structural Brief provides the following recommendations for design detail and construction:

- ◆ Where possible any new loading to the existing structure should be minimised. TTW recommend that the form of construction be typically steel beams supporting composite steel and concrete floors since this is both lightweight and able to achieve the long spans which are proposed. Stainless steel pool systems such as those available from Bradford Products should be considered for elevated pools since they are significantly lighter than a concrete counterpart and not prone to problems associated with concrete shrinkage.
- ◆ The Ribbon Building should be isolated from the adjacent tower structure as they are likely to behave differently under lateral load conditions (wind and seismic). Where full isolation is not possible, joints must be detailed to allow the structures to move laterally independent of one another.
- ◆ Temporary propping methods should inherently form part of the permanent works documentation due to the complexity of the demolition and requirement to retain portions of the existing structure.
- ◆ The construction of the basement car stacker should assume a fully watertight wall until such time that a geotechnical investigation is able to confirm whether water ingress is sufficiently low to allow a cut rock face to stand.

These recommendations will be included in the construction drawings.

9.26 SUSTAINABILITY AND RESILIENCE

The SEARs require the application to “*Identify how the development will incorporate best practice ESD principles in the design, construction and ongoing operation phases of the development*”.

A Sustainability Report has been prepared by WSP and is provided at **Appendix Z**.

All aspects of the Proposal will be subject to compliance with SEGL's Sustainable Design Guidelines. The guidelines provide a pathway for designers to ensure all SEGL assets are designed to be a world class integrated resort which delivers a memorable guest experience as well as best practice environmentally conscious and sustainable design. The guideline applies to all suppliers, contractors and sub-contractors and requires them to comply with the following while engaged:

- ◆ Operate on sound environmental principles to meet the highest industry standards;
- ◆ Manage their people ethically;
- ◆ Deliver world class projects incorporating best practice in innovation and design; and
- ◆ Ensure all design specifications consider ongoing running costs, energy efficiency and reducing carbon emissions.

A number of sustainability initiatives have been implemented on the site and are currently in operation. The proposed works associated with Mod 13 will utilise and support existing and ongoing sustainability initiatives on the site including:

- ◆ Mechanical system operation;
- ◆ Rainwater harvesting system;
- ◆ Harbour heat rejection system;
- ◆ Variable Speed Drives (VSD) upgrades to fans and pumps;
- ◆ Vertical transportation upgrades;

- ◆ Energy sub-metering; and
- ◆ Water sub-metering.

A more significant energy efficiency feature of the Proposal is the provision of a 165kWp photovoltaic system comprising of:

- ◆ PV panels on the roof of the MUEF; and
- ◆ Building-integrated photo voltaic (BIPAC) integrated into the top side of the external horizontal shade louvres to the residential floors.

Table 28 – Photovoltaic System Benefits

Metric	Benefit
System Capacity	165kWp
Reduced Peak Demand	~165kWp
Annual Electricity Generated	~231MWh/ annum
Carbon Offset from grid electricity	~200t CO ₂ / annum

SEGL have set ambitious sustainability targets for the project, focusing on achieving Australian best practice sustainability outcomes across the suite of area classifications within the project. The following sustainability performance targets/requirements are proposed:

- ◆ NatHERS and BASIX compliance (apartment dwellings only);
- ◆ National Construction Code (NCC) 2016 Section J Energy Efficiency compliance (all non-residential components of the project);
- ◆ Design to achieve a NABERS Energy and Water for Hotels Rating (Ritz-Carlton Hotel Only, rating certification to be considered in operation);
- ◆ Green Star Design and As Built 5 Star Rating (combined Ritz Carlton Hotel and Residential Tower component only); and
- ◆ Designed for compliance with SEGL's Sustainable Design Guidelines (Whole project).

The Sustainability Report outlines the strategy of compliance for each of these sustainability targets, as well as modelling and analysis that has been completed to ensure the design complies with the project requirements.

In addition to the above targets, and further demonstrating SEGL's commitment to sustainability in design, a whole building cradle to grave lifecycle analysis has been complete as well as a Climate Action Plan (addressed further below).

This Sustainability Report has identified the following key findings/conclusions and recommendations:

- ◆ The development can achieve Australian Excellence sustainability outcomes;
- ◆ The development achieves compliance with BASIX and NatHERS compliance for the residential dwelling components of the development;
- ◆ The development can achieve compliance with NCC Section J1 Building Fabric and Section J2 Glazing through the use of a high thermal performance building envelope for all non-residential component of the development; and
- ◆ The Ritz Carlton Hotel has the potential to achieve a NABERS for Hotels energy rating of 5.5 Stars and a NABERS for Hotels water rating of 4 Stars during operation.

The Tower component of Mod 13 is targeting a 5 Star Green Star rating through the GBCA's Green Star Design and As Built rating tool, which will provide third party verified sustainability outcomes for the project.

As noted in the Sustainability Report, the project is currently being registered with the Green Building Council of Australia for certification.

A certified Green Star Rating will provide independent, third party verified sustainability performance rating of the project, spanning sustainability aspects including management, indoor environmental quality, energy, transport, water, materials, land use and ecology, emissions and innovation. Through the rigorous assurance process, the building will be assessed for its sustainability credentials in design, construction and operational phases of the project. Through the provision of a large scale photovoltaic system, supply chain management and improved stormwater management systems and many other initiatives, the sustainability initiatives can have positive impacts on areas well outside the physical boundaries of this project and can be beneficial for the surrounding and broader environment.

9.26.1 Climate Adaptation

A Climate Adaptation Plan has been prepared by WSP to support the Ritz-Carlton Hotel and Residential Tower and is outlined within the Sustainability Report at **Appendix Z**.

This plan has undertaken an assessment of climate change impacts addressing the near future (2030), far future (2070) and 2100 (for sea level rise).

The assessment has also considered the secondary effects of relative humidity, drought/flood, wind, cyclones and bushfire.

All eighteen potential climate change risks identified in the risk assessment component of the climate adaption plan have been addressed by specific design and operational adaption measures. All eighteen potential climate change risks identified received adaption measures which help to mitigate and reduce the likelihood of that event occurring. All three extreme and high risks have been mitigated to medium level risks and two medium risks have been mitigated to low level risks through adaption measures.

9.26.2 Mitigation Measures

- ◆ Adopt the adaptation measures outlined in the Climate Risk Assessment which has been prepared as part of the Climate Adaptation Plan outlined within the Sustainability Report at **Appendix Z**.

9.26.3 Conclusion

In summary, the development will be achieving sustainability best practice outcomes and has been recognised by the Green Building Council. Mod 13 has been benchmarked against the industry recognised sustainability tools to demonstrate that the best practice holistic sustainability outcomes can be achieved. The existing and proposed ESD targets and initiatives demonstrate SEGL's commitment to sustainability during design, construction and ongoing operation. Mod 13 will utilise several planning tools to ensure the potential environmental impacts are mitigated, in particular the photovoltaic system will be installed to provide zero carbon electricity to the project.

Further, the development can achieve Australian Excellence suitability outcomes and achieve BASIX and NatHERS compliance for the residential component as evidenced in the Sustainability Report at **Appendix Z**. The proposed ESD commitments build upon SEGL's existing initiatives proposed under the Major Project approval and all subsequent modifications, this will have a significant positive impact on the energy efficiency capabilities of The Star.

9.27 BUILDING CODE OF AUSTRALIA

A Building Code of Australia (BCA) Report has been prepared by McKenzie Group and is provided at **Appendix V**.

The BCA Report has reviewed the architectural design documents prepared by FJMT for compliance with:

- ◆ The National Construction Code (Building Code of Australia) 2016 Volume 1;

- ◆ The relevant Standards referenced in the BCA 2016 Volume 1;
- ◆ *Environmental Planning and Assessment Act 1979*; and
- ◆ *Environmental Planning & Assessment Regulation 2000*.

The BCA Report identifies aspects of the Proposal that are not capable of meeting the Deemed-to-Satisfy (DTS) provisions of the BCA, and identifies relevant performance requirements that these aspects will need to be assessed against. McKenzie have confirmed that the proposed development is capable of complying with the Building Code of Australia 2016.

9.28 ACCESSIBILITY

An Accessibility Design Review has been undertaken by McKenzie Group and is provided at **Appendix W**.

The report provides a compliance overview of the Proposal with respect to achieving compliance with BCA, the Disability Discrimination Act (DDA), Disability Standards, Access to Premises Standard (2010).

As noted in the report, 20% of the residential apartments (41 units) within the Proposal have been designed to be 'Universal Design' (silver performance level from Liveable Housing Australia) as required by SEPP.

In addition, 15% of the residential apartments (31 units) have been designed to be 'adaptable' in accordance with the provisions of the Sydney DCP 2012, and *Australian Standard AS 4299-1995 Adaptable Housing*.

The report identifies issues and recommendations to assist in the creation of a universally accessible environment within the proposed development.

9.28.1 Conclusion

It is anticipated that the Proposal can achieve a universally accessible environment if designed in accordance with the recommendations of the Accessibility Design Review.

The provision of 20% 'Universal Design' units and 15% 'Adaptable Units' will have a positive accessibility outcome as it will enable occupants to continue living in the same home by allowing these units to change with the needs of the occupants, and will benefit a range of people, including young families, older people, and people with permanent or temporary disabilities, while minimising the need to undertake difficult and costly retrofitting at a later date.

9.29 FIRE SAFETY

A Fire Protection Assessment has been prepared by WSP and is provided at **Appendix X**.

This report outlines the proposed fire protection strategies and design associated with the proposed development under Mod 13, including:

- ◆ Automatic Fire Sprinkler System;
- ◆ Fire Detection and Alarm System;
- ◆ Emergency Warning and Intercom Systems (EWIS);
- ◆ Gaseous Suppression Systems (To be determined if required during the fire protection detail design phase);
- ◆ Kitchen Suppression Systems;
- ◆ Fire Hydrant and Fire Hose Reel service;
- ◆ Portable fire extinguishers; and
- ◆ Water Mist System.

The fire protection provided within the Mod 13 development will be in accordance with deemed to satisfy requirements of the BCA, alternative solutions developed during the fire protection and fire engineering detailed design phase and as outlined by the PCA.

The report concludes that:

- ◆ WSP have reviewed and considered the design of the building and are satisfied that the required plantroom space to accommodate the additional fire services infrastructure can be supported within the Mod 13 design.
- ◆ WSP have considered the design and reviewed it against the requirements of the Building Code of Australia and are satisfied that the fire protection design required within the Mod 13 project works can be accommodated to meet legislative and code requirements as listed above within this document.

A Fire Engineering Assessment has also been undertaken by WSP and is provided at **Appendix Y**.

The Fire Engineering Assessment provides a detailed assessment of the building characteristics, summary of the nearest Fire & Rescue NSW Fire Stations, fire and smoke compartmentation, as well as the proposed fire egress provisions for the Proposal in relation to the existing development and the site.

It provides a summary of the BCA's deemed-to-satisfy provisions that all building work must comply with, unless it has been specifically varied through performance based fire engineering assessment or the by the Principal Certifying Authority (PCA).

The Fire Engineering Assessment also presents a strategy for a consolidated approach to fire life safety at The Star. WSP are currently in the process of undertaking a thorough investigation of all fire engineering elements previously performed at The Star, which includes a review of the existing fire systems, evacuation management plans and operational procedures on site. The intention is to amalgamate the existing fire life safety approach with the proposed new development to create a single holistic fire life safety strategy under a single Fire Engineering Report.

In the Fire Engineering Assessment, WSP identifies the relevant stakeholders to be engaged for this process, the methodology for the process, as well the approximate programme schedule. WSP concludes that, *"given the staging of the works on site, it will not be possible to supply an all-encompassing Fire Engineering Brief or Fire Engineering Report until all the sub-projects are designed and underway. It is therefore proposed that this process will take place on a project by project basis, with all of these reports being amalgamated into a single FER report as works near completion across site"*.

This assessment concludes that:

- ◆ The proposed development is capable of compliance with the BCA requirements in relation to fire and life safety;
- ◆ The compliance requirements list in the BCA Report (**Appendix V**) can be accommodated into the proposed development (noting that any subsequent detailed design at later stages will need to incorporate design elements to ensure that compliance can be achieved); and
- ◆ Some design features do not meet the deemed-to-satisfy (DtS) provisions of the BCA. However, the proposed development can meet the performance requirements of the BCA through fire engineering analysis and performance based solutions addressed in the Fire Engineering Assessment.
- ◆ The fire protection services will be designed to best practice principles to ensure that environmental impacts of the development are limited.

9.29.1 Mitigation Measures

- ◆ Fire protection measures to be in accordance with the recommendations of the Fire Protection Assessment at **Appendix X**, the BCA and the performance based solutions addressed in the Fire Engineering Assessment at **Appendix Y**.
- ◆ Fire Engineering Reports for each relevant stage of the development to be completed prior to issue of the relevant

interim Occupation Certificate.

- ◆ An amalgamated Fire Engineering Report to be completed prior to issue of the final Occupation Certificate.

9.30 SERVICES

Umow Lai has prepared an Electrical Infrastructure Report (**Appendix AA**) and a Hydraulic Infrastructure Report (**Appendix BB**). The Electrical Infrastructure Report and Hydraulic Infrastructure Report constitute the Integrated Infrastructure Management Plan required by the SEARs.

As described in these reports and summarised in **Section 3** of the EAR, the site has existing electricity, telecommunications, water, sewer, and gas connections. Some of these services will need to be augmented or upgraded as summarised below.

9.30.1 Electricity

To support the cumulative demand placed on the AUSGRID high voltage network as a result of Mod 14 and Mod 13, it is proposed to install parallel tri-generation on the low voltage network in the form of on-site gas power electrical generation to run in parallel with the AUSGRID network.

The upgraded combined gas and diesel powered on site generation will meet the alternative power supply provisions of the National Construction Code for supplies to the site's statutory essential services.

The existing diesel generators on the site will only operate during power failure mode, and no works are proposed to these generators except for relocation of the associated exhaust flues to accommodate the Mod 13 tower.

Umow Laid submitted an application to AUSGRID in September 2016 in relation to these works, with the request to provide estimates of the order of costs, estimated timeframes to implement the upgrades, and details of the technical considerations and any limitations. This letter is provided as an attached to the Electrical Infrastructure Report.

An update was received from AUSGRID on 26 June 2017 stating that

"A range of connection options have been considered and compared based on overall cost as well as general technical suitability and integration with our own network development plans for the area. Through this process the options have been narrowed down to two key options available for further consideration:

- 1. New 33kV feeders from Pymont STS*
- 2. New 11kV feeders from Darling Harbour zone substation and upstream 11kV network augmentation"*

Further updates will be provided as part of the formal lodgement and assessment process.

9.30.2 Gas

The proposed electricity augmentation works will also place additional demand on the gas network.

The proposed works in relation to Mod 14 and Mod 13 will introduce a higher demand on the gas supply, and will require installation of a new Natural Gas meter and regulator assembly to accommodate the increased demand.

Preliminary discussions with Jemena suggest that the required gas demand is available in the local network. A formal application is to be lodged.

9.30.3 Water

Land Partners (who are an accredited Water Service Coordinator) lodged a pre-Section 73 'feasibility letter' to Sydney Water to assessed the suitability of Sydney Water's water and sewer infrastructure to supply the proposed development under Mod 14 and Mod 13.

The feasibility letter response was received from Sydney Water in March 2016 indicating that there is adequate capacity in the local water supply network and confirms that based on the building heights, the proposed development will require a connection to either the 200 or 250 mm main.

To address the cumulative cold-water demand as a result of Mod 14 and Mod 13, it is proposed to incorporate a 150-mm main connection extending from the Pirrama Road 250mm SWC water main as described in the Hydraulic Infrastructure Report. The proposed water infrastructure upgrade is considered acceptable and will not have any adverse environmental impact.

The proposed hydraulic infrastructure works will facilitate positive environmental outcomes for the existing site and surrounding environment by reducing stormwater runoff from the site and reusing more captured rainwater within the site.

9.30.4 Sewer

In relation to its sewer network, Sydney Water's response indicates that the wastewater gravity system has uncommitted spare capacity for the anticipated additional sewage load. It also notes that the downstream pumping station has capacity, but the dry weather storage is limited.

A pre-Section 73 'feasibility letter' has been lodged with Sydney Water outlining the increase in sewer outflow demand with respect to the capacity of the existing 375mm Sydney Water Corporation's sewer main. Sydney Water's response confirms that the existing 375 main has the capacity for the proposed additional load; however, there may be an associated infrastructure charge to increase the capacity of the downstream pumping station.

Mod 14 and Mod 13 will introduce a higher demand on the main sewer infrastructure connections. A new sewer main connection is proposed to meet the increased demand associated with Mod 14 and Mod 13 development. The proposed 300mm sewer connection will extend from the Pirrama Road 375mm SWC sewer main. The upgrades to the sewer main will not impact the functionality of the sewerage system on site and in the locality, and accommodate the increase in sewer demand.

The Section 73 Certificate will be formally lodged with Sydney Water once planning approval is obtained, as confirmed in the correspondence received from Sydney Water dated 3 March 2016.

9.30.5 Telecommunications

The proposed works as part of Mod 14 and Mod 13 are not anticipated to require augmentation or upgrades of the Telstra street infrastructure.

Additional on-site Data Hubs and cabling infrastructure will be provided as part of Mod 13 to serve the areas of the site to be developed.

It is noted that the incoming carrier service currently terminates in the Data Recovery Centre located at Level 02 in the northern portion of the site, which is proposed for partial demolition as part of Mod 13. Umow Lai is liaising with Telstra to relocate the incoming carrier service to be clear of the development footprint of Mod 13 tower.

9.31 STORMWATER AND FLOODING

9.31.1 Stormwater Drainage

The Hydraulic Infrastructure Report prepared by Umow Lai (**Appendix BB**) addresses stormwater generated by the Proposal.

The catchment area from the site will not change as a result of Mod 13. The report concludes that there will be no increased stormwater flows for the site, and that the existing site stormwater infrastructure has adequate capacity to drain the proposed new build areas.

As part of Mod 13, upgrades to the internal stormwater drainage system is proposed along with works to the internal stormwater infrastructure including:

- ◆ reinstating the existing northern stormwater harvesting tank and diverting new drainage from Mod 13 areas into this tank where practical; and
- ◆ installing new rainwater pumps and filtration equipment at Level B4 and interface with the existing site recycle flushing water distribution system.

9.31.2 Stormwater Quality

Stormwater quality will be maintained by ensuring that all carpark drainage is collected via two separate stormwater pump systems, one in the Edward Street catchment and the other servicing the rest of the carpark, with each featuring an oil separator at the collection sump. New building area catchment will be directed to either the northern or southern collection systems, and utilise the existing stormwater quality treatment devices.

The new car park excavation for the Ritz Carlton tower car stacker will be provided with a collection sump and pump out. This will also feature a slit arrestor and oil separation device.

9.31.3 Flooding

A Flood Impact Assessment has been prepared by TTW (**Appendix DD**) which utilised Council's flood model. This indicates overland flows occur around the site and are generally contained within the road network. Notwithstanding this, the potential exists for overland flow to overtop the kerb and flood the site at the following locations:

- ◆ Trapped low point on Pyrmont Street with no overland flow route.
- ◆ Low point on Edward Street, within light rail track, with an overland flow route to Pirrama Road.
- ◆ Low point in Pirrama Road, east of Edward Street, with an overland flow route north west along Pirrama Road to Darling Harbour.
- ◆ Low point in Pirrama Road, north west of Edward Street, with an overland flow route to Darling Harbour.

The existing Council flood model results show significant flood depth at these low points. The trapped low point on Pyrmont Street is a critical location as water ponding here would not be able to escape, and has the potential to flood the site through building entrances. Similarly, the proposed vehicle entrance at Pyrmont Street and the existing vehicle entrance on Edward Street are located near low points and are also at risk of flooding.

9.31.4 Mitigation Measures

To mitigate the potential flood risk to the development site, the Flood Impact Assessment recommends several upgrades to the existing stormwater pit inlets and pipes within the existing network as follows:

Pyrmont Street

- ◆ 16 existing pits upgraded to 3 m kerb inlet pits.
- ◆ 36 m of 375 mm pipe upgraded to 600 mm pipe.
- ◆ 68 m of 450 mm pipe upgraded to 900 mm pipe.

Edward Street

- ◆ Two new 3 m kerb inlet pits.
- ◆ Two existing pits upgraded to 3 m kerb inlet pits.
- ◆ Five metres of new 750 mm pipe.
- ◆ Nine metres of 300 mm pipe upgraded to 600 mm pipe.
- ◆ 3 metres of 375 mm pipe upgraded to 750 mm pipe.
- ◆ 10 metres of new 600 mm pipe.

The proposed mitigation works reduce the 100 year ARI flood depth from 420mm to 230mm at the low point in Pymont Street, and from 390mm to 290mm at the low point in Edward Street. The Pymont Street Car Park Entry has been designed with a flood gate 100 year ARI flood level plus 500 mm, which is considered to adequately mitigate any flood risk.

The Flood Impact Assessment further recommends a flood gate across the full vehicle entrance opening of the proposed Pymont Street Car Park Entry to ensure flood protection up to the 100 year ARI flood level plus 500 mm in accordance with Sydney DCP 2012. This has been incorporated into the design as shown in the Architectural Plans by DWP at **Appendix B**.

9.31.5 Conclusion

The proposed flood mitigation works will have a positive impact on the site and surrounds as it will reduce the depth of ponding and hazard around the development site, ameliorate the flood risk to the development site, adjacent existing properties and to the general public.

9.32 WATER MANAGEMENT

A Water Management Report has been prepared by Umow Lai and is provided at **Appendix CC**. Mod 13 proposes to improve the existing water management methods onsite by connecting the existing Grey Water Treatment Plant and Recycled Water System to Mod 13 works and recommissioning the existing 225kL northern rainwater harvesting tank, which is currently not in use.

The report holistically assesses the existing hydraulic services on the site and makes recommendations on the use, conservation, reuse and disposal of potable/non-potable water; wastewater, and rainwater/stormwater. It also provides recommendations on water sensitive urban design (WSUD).

These recommendations include:

- ◆ Water efficient fixtures and fitting selection;
- ◆ Water meters with BMS connection will be installed at all major water use area for hot and cold and recycle water services;
- ◆ The recycled water system will be extended to the proposed Mod 13 development areas for public amenity WC flushing;
- ◆ The existing site stormwater infrastructure has adequate capacity to drain the proposed new build areas. The catchment for the site will not change as a result of the development; therefore there will be not increased stormwater flows onsite;
- ◆ The existing disused northern stormwater harvesting tank is to be reinstated and new drainage from Mod 13 areas to be diverted where practical to this tank;
- ◆ Rainwater collected shall be directed to interface with the existing site recycled flushing water distribution system;
- ◆ Install new rainwater pumps and filtration equipment at Level B 4 and interface with the existing site recycled flushing water distribution system; and
- ◆ New area catchment will be directed to either the northern or southern collection systems, and utilise the existing stormwater quality treatment devices.

9.32.1 Conclusion

The Water Management Report assesses the existing hydraulic services on the site and makes recommendations on the use, conservation, reuse and disposal of potable/non-potable water. The recycled water system will be extended to the proposed Mod 13 development areas for WC flushing, further rainwater collection will be directed to interface with the existing site recycled flushing water distribution system. The new building works will be fitted with water efficient fixtures and fittings. The proposed Water Management Strategy will facilitate positive environmental outcomes for the site, this will be achieved by a reduction of stormwater runoff from the site, greater use of captured rainwater within Mod 13, expansion of the existing recycled water distribution to Mod 13, and more robust water use monitoring and leak detection

9.33 WATER QUALITY: MARINE ECOLOGY

The Harbour SREP provides planning principles for development within the Sydney Harbour Catchment area. The Star falls within this area. This environmental planning instrument is supplemented by the SHFW DCP 2005, which provides detailed design guidelines for development to which it applies.

The relevant aims of the Harbour SREP are:

- (ii) *to ensure a healthy, sustainable environment on land and water,*
- (iii) *to achieve a high quality and ecologically sustainable urban environment,*
- (iv) *to ensure the protection, maintenance and rehabilitation of watercourses, wetlands, riparian lands, remnant vegetation and ecological connectivity,*

Division 2 of Part 3 of the Harbour SREP outlines particular matters to be taken into consideration by consent authorities when assessing development under Part 4 of the EP&A Act or by public authorities before carrying out activities under Part 5 of the EP&A Act. While not applicable to Mod 13, of relevance is 'Clause 21 Biodiversity, ecology and environment protection' which states:

"The matters to be taken into consideration in relation to biodiversity, ecology and environment protection are as follows:

- (a) development should have a neutral or beneficial effect on the quality of water entering the waterways,*
- (b) development should protect and enhance terrestrial and aquatic species, populations and ecological communities and, in particular, should avoid physical damage and shading of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities),*
- (c) development should promote ecological connectivity between neighbouring areas of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities),*
- (d) development should avoid indirect impacts on aquatic vegetation (such as changes to flow, current and wave action and changes to water quality) as a result of increased access,*
- (e) development should protect and reinstate natural intertidal foreshore areas, natural landforms and native vegetation,*
- (f) development should retain, rehabilitate and restore riparian land,*
- (g) development on land adjoining wetlands should maintain and enhance the ecological integrity of the wetlands and, where possible, should provide a vegetative buffer to protect the wetlands,*
- (h) the cumulative environmental impact of development,*
- (i) whether sediments in the waterway adjacent to the development are contaminated, and what means will minimise their disturbance."*

The existing harbour heat rejection (HHR) system onsite comprises a water intake point in Jones Bay Road, a heat exchanger and pumping system within The Star's basement, and a water discharge point in Pyrmont Bay.

As part of Mod 14, the system was approved to be upgraded by replacing the existing three (3) pumps with six (6) new pumps (which includes a built-in redundancy of two pumps that will operate as standby pumps), internal pipework modification to accommodate new pumping arrangement, and filtration system and strainer system upgrade within the plantroom. As confirmed in the Mechanical Services Report at **Appendix KK**, the proposed HHR system upgrades have been designed to accommodate increase in loads over a number of years, including development relating to Mod 13, without the need for further heat rejection system upgrades.

The works proposed as part of Mod 13 will be connected into the site's central energy plant, and utilise the site's upgraded HHR system.

The impacts of the proposed upgrades to the HHR system have been comprehensively addressed within Mod 14 concluded that there will be no evident changes in environmental conditions in the harbour when the volume of harbour water used is increased progressively by 50% as now approved.

There will be no impact on marine ecology arising from the Proposal beyond that which has already been assessed.

9.34 GEOTECHNICAL & GROUNDWATER

A Geotechnical Assessment has been prepared by JK Geotechnics, and is provided at **Appendix PP**.

To enable the development to progress, the Geotechnical Assessment provides preliminary comments and recommendations on footing design, excavation retention, rock face support, excavation induced ground movements, lateral restraint, and additional geotechnical investigations.

9.34.1 Mitigation Measures

The Geotechnical Assessment recommends the following additional investigations to be undertaken during construction design development and during construction:

- ◆ Following demolition of the existing building, it is recommended that deep cored boreholes be completed at each heavily loaded column in order to optimise the design bearing pressures. In addition, and for preliminary design purposes, it is recommended that three cored borehole be completed around the existing building to assess the subsurface conditions at depth as well as the groundwater characteristics.
- ◆ Within the soil profile, Standard Penetration Tests (SPT) should be completed at no more than 1.0-1.5m depth intervals to assess the relative compaction/strength of the subsoil profile. Bedrock must be diamond core drilled to at least 6m below bulk excavation level. The depths of the cored boreholes below bulk excavation level may need to be significantly increased if tie-down anchors are proposed.
- ◆ Insitu Packer testing should be completed in the three preliminary cored boreholes to assess the permeability of the bedrock at various levels. In these three boreholes, monitoring wells should be installed and sealed at different levels within the sandstone bedrock to monitor groundwater levels and quality, and also for the purpose of completing pump-out tests to assess inflow rates. Adjacent to each of the three preliminary boreholes, an adjacent borehole should be drilled to the bedrock surface for the purpose of installing a second groundwater monitoring well. Groundwater sampling and analysis from these six boreholes will be required to satisfy DPI Water, and also to assess salinity.
- ◆ Groundwater level monitoring of all wells must be carried out to assess the design head of water for a tanked basement. The monitoring period should include heavy and prolonged rainfall events. Groundwater modelling and seepage analyses should then be completed to assess inflow rates into the proposed excavation.
- ◆ The geotechnical investigation report would need to contain detailed advice on retention systems, groundwater quality and dewatering, excavation, excavation induced ground movements, footings, including total and differential settlements, and the lowest basement floor slab. We recommend that 3D Plaxis (finite element) analyses be carried out to model the rock-structure interaction.
- ◆ A waste classification will need to be assigned to any soil excavated from the site prior to offsite disposal. Subject to the appropriate testing, material can be classified as Virgin Excavated Natural Material (VENM), General Solid, Restricted Solid or Hazardous Waste. The waste classification assessment should be carried out concurrently with the detailed geotechnical investigation (post-demolition) so that the appropriate samples are obtained from the geotechnical boreholes.

9.35 CONTAMINATION

State Environmental Planning Policy No. 55 – Remediation of Land is the primary environmental planning instrument guiding the remediation of contaminated land in NSW. SEPP 55 requires a consent authority to consider whether the land is contaminated, and if so, whether the land will be remediated before the land is used for the intended purpose.

Contamination has been addressed in previous approvals on the site including DA 33/94 (Original Major Project Approval) and MP08_0098 (Project Star). These assessments included the separate portions of the site before they were amalgamated into the current land title (Lot 500 in DP 1161507).

These separate (former) lots as well as the relevant contamination assessment conclusions are summarised below:

- ◆ **Lot 122 in DP 828957 (former Power Station Site – western portion of the subject site):** A formal Section 35 Revocation notice (Revocation Notice 379) was issued by the EPA on 13 May 1994 confirming that it is satisfied that the site has been remediated in accordance with acceptable limits for medium density residential housing purposes.
- ◆ **Lot 121 in DP 828957 (former Switching Station Site – southern corner of the subject site):** A Phase 1 Contamination Assessment was provided as part of MP08_0098 confirming that the potential for contamination associated with the site for a commercial land use is likely to be generally low.
- ◆ **State Rail Authority Site – eastern portion of the subject site:** DA 33/94 was accompanied by a report by AGC Woodward Clyde (Feb 1994) that concluded that the SRA land contains no adverse levels of contamination and that based on the results of the site investigation and the health risk assessment, there does not appear to be any need to remediate the site for development to commercial/industrial or medium density residential development.

The area of significant site disturbance as part of Mod 13 is limited to the tower location in the northern portion of the site which has been confirmed to contain no adverse levels of contamination.

The Geotechnical Assessment at **Appendix PP** notes that previous borehole testing fill material comprising sandy fill with sandstone gravel, cobbles and boulders, with sandstone bedrock encountered between RL 100.10 and RL 103.00.

9.35.1 Mitigation Measures

A detailed Environmental Management Plan will be prepared for all works in Mod 13 and will include a waste management strategy for the construction phase of the development including details of the appropriate removal of materials from the site (including any asbestos uncovered during demolition and construction phase) and excavation material.

No construction works will be commenced until this detailed Environmental Management Plan has been submitted to the DP&E.

9.35.1 Conclusion

Given the above conclusions and the continued use of the site as casino since these approvals, there is a low likelihood of significant contamination being present on the site.

9.36 TREE REMOVAL

An Arboricultural Assessment Report has been prepared by Earthscape Horticultural Services and is provided at **Appendix R**.

The assessment finds that the proposed development will necessitate the removal of these trees:

- ◆ **Four (4) trees of low and very low retention:** T10 (group of 7 x small Bangalow Palms), T21 (London Plane Tree), T31 (Honey Locust), and T44 (Cabbage Tree Palm);
- ◆ **Four (4) of moderate retention value:** T22 and T23 (London Plane Trees), T37 (Little Gem Magnolia), and T71 (Hill's Weeping Fig); and
- ◆ **Sixteen (16) trees of high retention value:** T43, T45, T46, T47, T48, T49, T61, T62, T63, T64, T65, and T66 (Cabbage Tree Palms), and T67, T68, T69, and T70 (Hill's Weeping Fig).

The proposed landscape design on Pirrama road will necessitate the removal of 13 existing Cabbage Tree Palms and 5 Fig Trees. It is proposed to replace them with 13 *Angophora costata* as street trees on Pirrama road, with the retention of 5 existing Cabbage Tree Palms at the centre of the site frontage. This approach is aligned with the current City of

Sydney Street Tree Master Plan (STMP) and provides increased amenity to the public domain, through increased canopy and shade coverage. An additional 6 Magnolia trees, 6 Cabbage Tree Palms will also be added within the public realm and improve overall amenity to the street and retain elements of the existing character. The grove of magnolias will be added to the frontage of the site adjacent to the proposed F&B outdoor dining areas. The environmental impacts of replacing these trees with a larger canopy tree will provide improved amenity in the long term. Furthermore, upgraded street finishes will provide a high-quality pedestrian experience, better wayfinding & pedestrian safety to the existing light rail stop.

At the Ritz-Carlton porte-cochere, 5 existing Figs will be removed to incorporate the new entrance and replaced with 3 new *Angophora costata* street trees and 3 new Palms in raised planters within the lot boundary. The replacement species will be of equivalent amenity in the long term and are also part of the long-term street tree strategy of the City of Sydney.

The seven existing Fig trees along the Pirrama Road/Jones Bay road frontage will be retained and protected. There will also be two new raised planters within the private lot fronting the street, which will give an improved street frontage

The seven existing small Palms in a planter within the lot boundary will be removed in the works surrounding this as these trees are of low ecological value.

The Pyrmont Street car park entry will necessitate the removal of three existing trees. The loss of amenity of these street trees is to be mitigated with replacement street and public realm trees and planting in other areas around the site.

As described in the Arboricultural Impact Assessment, ancillary works including pavement works, upgrades to various entries, temporary construction hoardings, and minor excavation relating to a new outdoor seating area will encroach within the TPZ of several trees. The report recommends tree protection measures to mitigate any adverse impacts on the health of these trees.

The report concludes that:

- ◆ The trees of low and moderate value can be replaced with new tree planting in the short term – as such there will be relatively minor and temporary loss of amenity;
- ◆ The trees of high retention value have no special heritage or ecological significance, but are mature specimens that make a positive contribution to the amenity of the site and streetscape areas;
- ◆ Because there are no feasible options that can be implemented that would permit the retention of these trees, replacement planting is proposed to compensate for loss of amenity in streetscape areas in accordance with Council's Street Tree Master Plan; and
- ◆ Remaining trees surrounding The Star are proposed to be retained and protected during construction in accordance with the recommended Tree Protection Measures and Tree Protection Plan outlined in the Arboricultural Impact Assessment.

9.36.1 Mitigation Measures

- ◆ The recommended tree protection measures addressed in the Arboricultural Impact Assessment report should be adopted during construction of Mod 13; and
- ◆ Where trees are proposed to be removed to accommodate the proposed development, consideration should be given to planting new trees within appropriate areas of the site in accordance with the recommendations within the Arboricultural Impact Assessment report.

9.36.2 Conclusion

Seventy-two trees are located in the vicinity of the Approved Project. The Proposal will remove 24 of these trees and replace them with 13 Sydney Red Gums, 5 Little Gem Magnolias, and six Cabbage Tree Palms. While 16 of the trees to be removed are of a high retention value, this is not because of any special heritage or ecological significance, but

simply because they are mature specimens that contribute to the amenity of the site and streetscape adjoining the site. Any loss of amenity will be temporary, as the existing trees to be removed will be replaced by species that will be larger at maturity than the existing trees. Accordingly, the Proposal will have a limited environmental impact in terms of trees compared to the Approved Project.

9.37 OPERATIONAL WASTE MANAGEMENT

A Waste Management Plan has been prepared WSP and is attached at **Appendix II**.

The Report assesses operational waste for the proposed Mod 13 works. The assessment has been conducted to satisfy the City of Sydney (CoS) Development Control Plan 2012 (DCP) section 3.14 and the Council of the City of Sydney Policy for Waste Minimisation in New Developments 2005 (The Policy).

The aim of this Operational Waste Management Plan is to establish a strategy that:

- ◆ Maximises resource recovery from waste, and minimises diversion of waste to landfill;
- ◆ Provides a coordinated system for storing and collecting waste from the site; and
- ◆ Manages operational waste on site to be healthy and efficient, minimises disruption to amenity, and is conducive to minimisation of the absolute quantities of waste generated.

Waste management collection presently occurs at the Darling loading dock accessed via Edward Street, with recycling bins, compactors, glass bins and paper bins stored in and collected from the dock. Site stewarding staff currently rotate full for empty bins at various points of use, transferring them to the dock storage receptacles from which the collection occurs.

Operational waste is generated once the site is fully constructed, with the commencement of occupancy and operation.

During operation, apartments and hotel rooms are expected to generate approximately 595 kg of general waste to landfill daily and 80 kg of commingled recyclables (uncompacted) daily. All other areas are expected to generate approximately 460 kg of general waste to landfill daily and 250 kg of commingled recyclables (uncompacted) daily.

The Operational Waste Management Plan establishes a strategy that maximum resource recovery and minimises diversion of waste to landfill whilst providing a coordinated system for storing and collecting waste from the site. The Plan outlines the following:

- ◆ **Waste stream separation:** separate, co-located receptacles for general waste and recyclable materials are recommended to be placed at each bin position in residences, retail and public realm locations.
- ◆ **Bins and storage locations:** chutes for separated General Waste and Commingled Recyclables are recommended for the hotel and residential levels.
- ◆ **Collection and recovery:** Private contractor collection of all operational waste from The Star site is recommended, due to the scale and integration of the development and the quantities and mix of waste streams to be generated, as well as limitations on scope for municipal waste collection.

9.37.1 Mitigation Measures

The following recommendations are made by WSP to ensure appropriate disposal of waste streams:

- ◆ General waste should be collected by an accredited private waste contractor with disposal off site to an approved and registered land fill facility.
- ◆ Commingled recyclables should be collected by an accredited private waste contractor with disposal off site to an approved recycling and resource recovery facility.
- ◆ Collection of baled paper and cardboard packaging is to be performed by a dedicated paper recycling contractor.
- ◆ Separated glass containers are to be collected by a dedicated glass recycling contractor, and processed at an approved glass recovery and recycling facility.

- ◆ Records of disposal should be provided in a summary report to The Star on a minimum quarterly basis as a contract condition for all private waste contractors engaged. Disposal records should include weight, type of stream, collection and disposal date and disposal destination as a minimum, sufficient for purposes of auditing. Requiring these records will provide assurance that correct disposal and resource recovery is taking place, and allow for ongoing monitoring and feedback on how the waste system is performing.
- ◆ The Waste Management Plan also provides guidelines on bin storage, signage, and monitoring which should be satisfied in relation to operational waste management for Mod 13.

9.37.2 Conclusion

Mod 13 will have a limited environmental impact in terms of waste generation and management as the Proposal incorporates efficient waste management design features and technology to optimise storage and transfer facilities, overall improving site amenity, operational efficient and traffic considerations. The Waste Management Plan's projection of recyclables represents a comparable level of landfill diversion by mass to that of the existing site operations prior to Mod 13, demonstrating the Proposal will have a limited environmental impact beyond the Approved Project.

9.38 CONSTRUCTION IMPACTS

9.38.1 Construction Management

A preliminary Construction Management Plan has been prepared by WSP, and is provided at **Appendix HH**.

The CMP outlines measures to minimise the disturbance and impacts of the construction activities on the surrounding environment and the operation of The Star. The CMP is intended to:

- ◆ Define the project phases/staging;
- ◆ Define the scope of construction major works;
- ◆ Define the guidelines of the construction methodology;
- ◆ Establish clear communication guidelines;
- ◆ Define the guidelines for a site management plan;
- ◆ Define the guidelines for a site safety management plan to include public amenity, safety and pedestrian management;
- ◆ Outline waste management initiatives as suggested in the Mod 13 Waste Management Report; and
- ◆ Define the noise and vibration mitigation approach during construction, as defined in the Mod 13 Noise Impact Assessment.

SEGL and the appointed Contractor will be committed to engaging with the local community, DP&E, the City of Sydney, Government Agencies including the CBD coordination unit of TfNSW, and stakeholders as they plan and deliver works pertaining to Mod 13.

Consultation will continue to be a key priority throughout the construction process to ensure the community and stakeholders receive regular updates and have the opportunity to provide feedback.

9.38.2 Construction Noise and Vibration

Construction Noise and Vibration has been addressed by WSP as part of the Noise Impact Assessment provided at **Appendix K**.

The Noise Impact Assessment outlines construction noise and vibration criteria in accordance with the Interim Construction Noise Guidelines (ICNG) which cover:

- ◆ Construction noise management levels for residential receivers;
- ◆ Construction noise management trigger levels at residences; and

- ◆ Ground borne noise limits at residential receivers.

The report notes that, because the Managing Contractor has not yet been appointed for the development, any Construction Noise and Vibration Management Plan (CNVMP) undertaken at this stage would be conceptual only.

A detailed assessment of construction noise and vibration will be prepared once a contractor is appointed and additional detailed construction methods are known. Based on this assessment, the CNVMP will need to be put in place by the Managing Contractor (once appointed) to manage the risk associated with construction noise and vibration from the proposed works.

9.38.3 Construction Hours

Based on Condition D11 of MP08_0098, the hours of construction will be:

- ◆ 07:00 to 17:30 Monday to Friday (inclusive);
- ◆ 08:00 to 15:00 Saturdays;
- ◆ between 9:00 am and 3:30 pm, Mondays to Fridays for mechanical rock blasting; and
- ◆ no work on Sundays and public holidays.

The hours of works for construction specified in Condition D11 are mainly to control construction noise from adversely impacting nearby sensitive receivers.

It is noted that Condition D11 contains a provision to allow minor internal works to the existing building, including but not limited to demolition of light weight partitions, construction of new partitions, installation of ceilings, finishing of floors, engineering services installations, carpet installation, lighting programming, painting, to be undertaken outside the nominated hours of construction in accordance with the Construction Noise and Vibration Management Plan required by condition B 21.

Should noise complaints be received by Council or other State government agencies from a place of different occupancy (including commercial premises) and the complaint being substantiated by a Council Officer or representative of the relevant State agency, the construction works occurring during the approved extended construction hours must cease operation until 'attenuation works' are carried out. In accordance with Condition D11, extended construction hours must not commence until compliance with the relevant noise conditions can be achieved.

All heavy demolition and construction works shall be restricted to between the hours of 9:00am – 4:00pm Mondays to Saturdays.

Noise levels generated by these low impact works are expected to be low enough that the existing building envelope of The Star would be sufficient to mitigate noise levels so that they do not impact receivers. It is therefore anticipated that Condition D11 will adequately mitigate any adverse noise and vibration environmental impacts associated with the site, including components relating to Mod 13.

9.38.4 Construction Traffic and Pedestrian Management

Road Network: The proposed routes for construction delivery are shown in **Figure 71** below, and will provide access to the main delivery locations around the site, including the Pirrama Road forecourt, the Jones Bay Road construction zone, the Jones Bay Road Loading Dock and the Pyrmont Street construction zone.

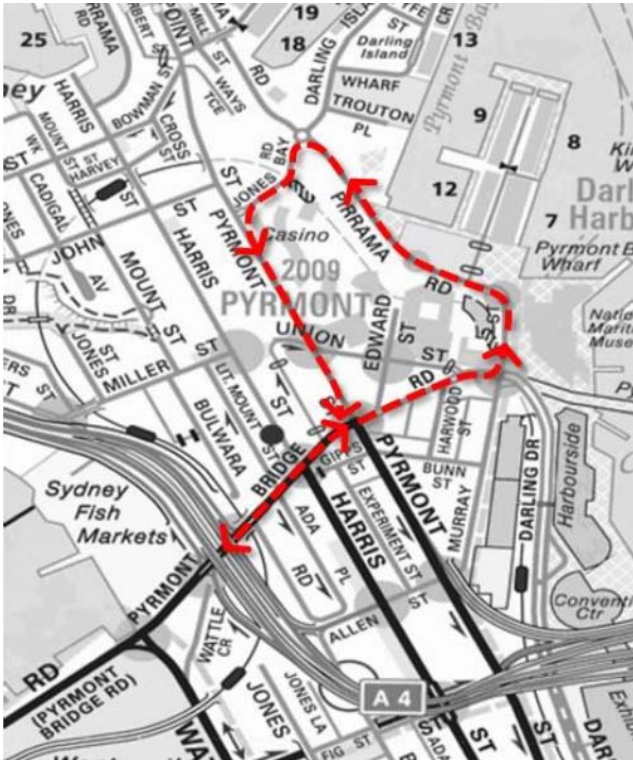


Figure 71 – Proposed Haulage Routes

The SIDRA analysis indicates that the surrounding network will operate at existing or acceptable performance levels, despite the additional traffic associated with Mod 13 construction activity.

The TIS assesses the cumulative road network impacts of Mod 13 construction as well as other approved or proposed construction activity near the site including the Harbourside and Darling Square developments.

Based on an analysis of these projects, including their planned construction periods, truck movements, and haulage routes, the TIS concludes that no adverse pedestrian and traffic impacts are anticipated during the construction of Mod 13.

During column strengthening works and upgrades to the Star Events loading docks, temporary closure of the northern end of the service road may be required for up to 4-months. An alternate link from the Service road to Pirrama Road is proposed during the construction closures. This temporary link will allow SEGL to maintain Taxi and Coach operations in the service road.

As noted in the TIS at **Appendix J**, this proposed left turn onto Pirrama Road will require the southern end of the bus zone to be shortened from 41 m to 21 m to ensure that large vehicles can enter Pirrama Road without swinging out into the southbound carriageway. The TIS notes that the shortening of the existing bus zone is not expected to impact the operation of Sydney Bus services because a 21-metre stop is adequate for the current frequencies and stopping patterns at the bus stop. In addition, the temporary exit will create a 20-metre clear zone on the approach to the stop to allow buses to manoeuvre comfortably into the stop.

Construction Parking: Based on current worker travel patterns to the site, most construction worker travel impacts will occur on existing public transport and active transport facilities. Given the Star car park is significantly underutilised during business hours, SEGL will allocate up to 200 on-site spaces for construction staff. However, to discourage car travel to the site, these spaces will be controlled using a booking system and parking above this threshold will be actively discouraged through on-site parking fees. SEGL will also continue to encourage construction works to take advantage of the excellent public transport access.

Pedestrian and Cycle Safety: The TIS outlines measures to maintain pedestrian safety by establishing a pedestrian safe access zones around the construction sites. The proposed construction traffic arrangements do not impact on any

cycle parking or cycle paths, and existing staff cycle parking facilities on Level B2 will be maintained throughout construction. The existing active transport access along the Pirrama Road entry to The Star and the light rail station will also be maintained throughout construction.

Bus Services: The traffic analysis has demonstrated that the increased traffic due to construction (workers and deliveries) will not have any significant impact on the performance of the network used by existing bus services.

The Construction Management Plan at **Appendix HH** notes that the main contractor must prepare a detailed Traffic Management Plan prior to the issue of the relevant Construction Certificate.

9.38.5 Construction Waste

Demolition and construction waste has been addressed as part of the Waste Management Plan by WSP provided at **Appendix II**.

Demolition of the existing podium structure to the north end of the site will occur from the notional cut line. A minimum 90% recovery target for waste produced during demolition is recommended, in line with best practice targets under a Green Star rating. Approximately 4,000 tonnes of waste are anticipated to be generated during demolition.

Construction of the proposed development will generate a variety of waste materials from stages. A minimum 90% recovery and recycling target is recommended for all waste from construction materials produced during construction. Improving on the 76% Aggressive Recovery Scenario 2014 target set in The Policy, this represents the equivalent of a best practice target for construction waste recovery under a Green Star rating and should be achievable with sufficient planning and coordination of site trades and specifications.

Specific collection zones and receptacles for different waste streams are to be collected within a construction zone adjacent to Pirrama Road and the primary Ritz Carlton Hotel and residential tower location.

The Waste Management Plan recommends that detailed planning of demolition and construction waste staging provisions should be conducted by the relevant contractors and project team at the appropriate point leading up to those phases.

9.38.6 Construction Air Quality

Air quality impacts relating to construction activities and operation of the Proposal has been covered in the Air Quality Report by WSP provided at **Appendix EE**.

The assessment concludes that the construction works associated with the Proposal have the potential to be a source of dust and gaseous emissions. However, the impacts of dust and gaseous emissions are likely to be of a small scale due to the locality and scale of works.

The potential sources of particulate matter and emissions that could impact air quality during construction are:

- ◆ Construction traffic transporting particles, construction material, or waste from loose construction material;
- ◆ Dust generated when cutting materials such as concrete slabs or bricks during construction; and
- ◆ Fumes from construction machinery – exhaust fumes and amounts of NO₂, CO, PM₁₀, and PM_{2.5}.

9.38.7 Construction Staging

Construction is planned to commence in August 2018 pending Mod 13 approval. Preliminary staging has been prepared for the development as detailed in the Construction Management Plan at **Appendix HH** and **Section 4** of the EAR. Detailed construction staging will be developed in consultation with SEGL and a construction programme will be prepared by the Main Contractor, to mitigate any impact on operational facilities and on the adjoining neighbourhood.

9.38.8 Mitigation Measures

- ◆ The appointed Contractor should prepare a final Construction Environmental Management Plan (CEMP) prior to

undertaking any work on the site.

- ◆ **Noise and Vibration:** A Construction Noise and Vibration Management Plan (CNVMP) should be prepared by the Managing Contractor covering noise, ground vibration, and ground borne noise as per the recommendations of the Noise Impact Assessment at **Appendix K**.
- ◆ **Traffic:**
 - SEGL to restrict on-site parking for workers to 200 spaces. These spaces will be controlled using a booking system and parking above this threshold will be actively discouraged through on-site parking fees.
 - Additionally, SEGL to continue to encourage construction workers to take advantage of the public transport access in accordance with the strategies outlined in The Star Travel Plan.
- ◆ SEGL to install bike parking upgrades as early works in Mod 13, to improve cycle parking opportunities during construction.
- ◆ **Air Quality:** An Air Quality Report has been prepared by WSP and is provided at **Appendix EE**. The report provides mitigation measures to manage sources of air contaminants during construction through a hierarchy of emission control measures which are prevention, suppression and containment. The mitigation measures include:
 - Vehicles and plant/equipment should be fitted with appropriate emission control equipment and be serviced and maintained in accordance with the manufacturers' specifications;
 - Loads comprising loose material entering or leaving a site should be covered;
 - Dusty activities should be dampened, particularly during dry weather;
 - Drop heights for materials should be minimised to control the fall of materials;
 - The number and size of stockpiles should be minimised. Stockpiles should not be located close to the site boundary possible, and should take into account predominant wind directions. Where possible and feasible, stockpiles should be covered or enclosed and protected from the wind;
 - Cutting of materials such as concrete slabs or bricks should be undertaken with extraction or suppression where possible. Pouring water over material as it is being cut can greatly reduce the amount of dust generated;
 - Skips should be securely covered; and
 - Materials should be removed from site as soon as practicable.

9.38.9 Conclusion

The construction works proposed under Mod 13 has the potential for traffic, noise and air quality impacts during the construction stage. However, as summarised above, the Construction Management Plan, Traffic Impact Statement, Noise Impact Assessment, and Air Quality Report provide a comprehensive range of mitigation and management measures that will limit the environmental impacts associated with the construction phase of the development to acceptable levels.

9.39 ECONOMIC IMPACTS

An Economic Impact Assessment report has been prepared by PWC and is provided at **Appendix L**.

The report notes that The Star's ongoing operation makes a considerable economic contribution to the state of NSW. In its current state (including the 2009-2013 expansion and Mod 14), The Star is estimated to:

- ◆ Create an additional 7,000 jobs (4,800 direct, 2,200 indirect) each year (on average from FY2017 to FY2030);
- ◆ Contribute \$6.9 billion to the NSW economy from FY2017 to FY2030 in additional gross state product (in real, present value terms); and
- ◆ Contribute \$4.1 billion to NSW's exports from FY2017 to FY2030 (in real, present value terms).

This report addresses the future economic contribution of The Star based on Mod 13. In analysing the current state of The Star, Mod 14 works have been included.

Mod 13 aims to meet the increasing demand of international leisure tourism. Under Mod 13, SEGL plans to invest approximately \$626 million of capital for the proposed Ritz Carlton Hotel and Residential Tower and balance of site works, to be undertake between 2018-2023. In addition, the report identifies the following incremental contributions to the NSW economy from Mod 13:

- ◆ Additional \$800 million contribution to the NSW economy from FY2017 to FY2030 (in real present value terms);
- ◆ An extra 747 jobs every year (average from FY 2017 to FY 2030); and
- ◆ An increase in household consumption in the NSW economy by \$329 million from FY 2017 to FY 2030 (in real, present value terms).

An industry breakdown of the economic contribution of Mod 13 shows that the most strongly impacted industries (measured in output, in real, present value terms) are:

- ◆ Construction: \$447 million.
- ◆ Retail and Wholesale Trade: \$237 million.
- ◆ Rental, Hiring and Real Estate Services; Professional, Scientific and Technical Services & Administrative and Support Services: \$232 million.
- ◆ Accommodation and Food Services: \$217 million.
- ◆ Manufacturing: \$163 million.

9.39.1 Conclusion

Investment in and benefits from the Proposal will flow through to the rest of NSW. Overall, the investment will generate an incremental \$793 million in economic benefits for NSW, stimulated by the construction phase through direct impacts to the construction industry and subsequent supply chain effects, as well as in the operational phase, through spending at The Star and wider NSW.

The Ritz Carlton Hotel, is a unique investment into the NSW accommodation market, given that the main addition is a '6-star' hotel. The investment therefore brings a significant new standard of accommodation into the market, with minor displacements in other areas of the accommodation sector. Through this investment, complementary services will receive flow-on economic benefits, for example, the food services industry. The Proposal will positively enhance the economy for NSW, by injecting additional funds, providing additional jobs and increase in household consumption.

9.40 SOCIAL IMPACTS

A Social Impact Assessment (SIA) has been prepared by Urbis in relation to the proposed works and uses and is included at **Appendix M**.

The SIA presents a review of the local demography, key socio-economic indicators, policy and strategic context, crime trends and key values and cultures in determining the net social impact of the Proposal.

The SIA notes that, based upon ABS Census 2016 data for the suburb of Pyrmont (SSA); the median age for Pyrmont residents is 34 and Pyrmont is one of the most highly populated areas in Australia with 151.57 persons per hectare. Further, 10% of all Australian casino visitors are from interstate and 5% of Australian casino visitors are from overseas countries.

There are four community facilities within a 1km radius of The Star; including SDN Pyrmont Children's Education and Care Centre, City Wiest Child Care Centre, KU Maybank Preschool and Little Learning School.

The SIA makes the following conclusions in terms of social impacts:

- ◆ The proposed Neighbourhood Centre will positively enhance the community's experience with a diversity of uses that will appeal to a variety of users;
- ◆ The development associated with Mod 13 has capacity to generate significant economic benefit through employment and local expenditure both during construction and operation;
- ◆ Amenity improvements associated with Mod 13 include improved activation of key public spaces, greater natural and casual surveillance, and enhanced public domain including street frontage to Pirrama Road and Jones Bay Road, the entrance to the light rail station and entrances to the new tower building;
- ◆ Noise sources from The Star are not a significant source of noise in the area. It is demonstrated that noise sources will be below the assessment requirements. Compliance with the Noise Management Plan will be implemented by SEGL. This will mitigate any potential impacts on hotel and residential tenants on site;
- ◆ Traffic impacts are considered to be at existing or acceptable levels. Onsite car parking will be made available for construction workers. Compliance with the recommendations in the Traffic Impact Assessment will be required;
- ◆ Cumulative impacts will be limited. The significant length of time the area will experience construction works is likely to create a greater impact on amenity than specific modifications to the site or expansion of uses. However, as with any significant development project a Construction Management Plan will be put in place to minimise impacts on the surrounding area;
- ◆ The Neighbourhood Centre will provide activation to the north-eastern corner of the site which increases natural and casual surveillance;
- ◆ The increase in the number of patrons and visitors to the area may increase the perception that the area or venue is unsafe, particularly when combined with an increase in venues that serve alcohol. These concerns can be mitigated and managed by the continuation of the existing RSA, and safety and security measures outlined in the CPTED report at **Appendix N**, as well as the implementation of the requirements of the lighting technical report on security and safety;
- ◆ The requirements to provide funding towards affordable housing within the region will be an important contribution to social infrastructure and potentially provide options for affordable key worker accommodation; and
- ◆ The ongoing implementation of existing RSA and RSG procedures is sufficient to manage the increase in patron numbers associated with Mod 13. The modifications do not include additional gaming facilities and are therefore unlikely to result in a rise in problem gaming or associated pressure on community services.

The SIA also concludes that the cumulative impacts of both Mod 14 and Mod 13 are expected to be limited as the impacts can be managed through current practices outlined in the Safer Nights Out at The Star.

The most significant cumulative impact is likely to be the length of time the area will experience construction works, with the combined construction period of Mod 14 and Mod 13 projected to be approximately 4 years. However, the SIA concludes that, given the development context of the region and the City and State's commitment to maintaining the region as a visitor destination, construction works in the local area are unavoidable, and can be addressed through a Construction Management Plan. Overall the Proposal can be built and operated to have limited social environmental impacts.

9.40.1 Mitigation Measures

The SIA includes recommendations to mitigate potential adverse social impacts associated with Mod 13 as follows:

- ◆ Implement the recommendations of the CPTED Strategy;
- ◆ Improve transport access by promoting use of the light rail through signage and lighting improvements;
- ◆ Ensure potential new residents are aware of the scale of operations of the site and the consideration that they will

effectively be living immediately adjacent to an 24/7 existing entertainment precinct;

- ◆ Continue close liaison with NSW Police to ensure patrols of publicly accessible areas to address anti-social behaviours;
- ◆ Allocate space in the on-site car parking, during business hours, for workers/tradesman parking and construction deliveries, to eliminate parking pressures on the surrounding street system;
- ◆ Ensure continued implementation of existing safety and security measures, including roving security patrols, security camera coverage on all perimeters, and management at taxi ranks;
- ◆ Implement the recommendations of Noise Impact Assessment Report;
- ◆ Implement the requirements of the Site-Wide Lighting Management Plan on security and safety;
- ◆ Implement the recommendations of the Traffic Impact Statement;
- ◆ Update the Plan of Management for the Neighbourhood Centre prior to Occupation Certificate when final tenants are confirmed for the centre. ;
- ◆ Continue to implement existing safety and security measure, including security patrols and CCTV coverage, and adherence to Plans of Management;
- ◆ Continue to ensure the implementation of RSA and RSG procedures;
- ◆ Promote and demonstrate The Star's commitment to RSA procedures and responses to anti-social behaviour in public forums to inform public perceptions;
- ◆ Continue to abide by ILGA Gaming Signage and Brochure standards (including in languages other than English); and
- ◆ Continue to engage with the community to keep them informed on decisions to reduce risk and anxiety about the redevelopment process.

9.40.2 Conclusion

The SIA has considered the Proposal, assessed baseline conditions, and profiled potential impacts. The assessment has also considered available supporting data and documentation including technical reports and assessments. The SIA concludes that the Proposal will generally have a positive social impact on the area, noting that the Proposal does not increase gaming floor space, and the positive impact of the Neighbourhood Centre. It is anticipated that any adverse social impacts relating to construction will be limited to the construction period and can be managed through a detailed Construction Management Plan to be prepared prior to issue of the first Construction Certificate.

10 MITIGATION MEASURES

Table 29 below summarises the mitigation and management measures that have been recommended for the proposed works, to ensure that the Proposal will have a limited environmental impact beyond that approved as part of MP08_0098, including and up to the Mod 14 approval.

Table 29 – Mitigation Measures

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
Built Form	<ul style="list-style-type: none"> ◆ Overshadowing to Union Square and Pyrmont. ◆ Daylight impacts on adjacent properties. ◆ The bulk and scale is not of a similar scale with its immediate surrounds. ◆ The streetscape is not of a similar style with the immediate surrounds. 	<ul style="list-style-type: none"> ◆ The Proposal will create a landmark architecture tower that is unique and true to the character of Pyrmont. It will enhance the streetscape and public domain surrounding the site, creating an exciting destination within Pyrmont. ◆ The design of a slender tower, means the shadow is 'fast moving' ensuring that the shadow impacts to any area are limited in time. ◆ The location of the tower has been chosen to minimise shading on neighbouring properties to ensure the majority of the shadow falls predominately on the existing property site, detailed outlined in FJMT's daylight impact analysis located at Appendix C. ◆ The proposed facades have been carefully selected and designed to respect the urban context and history of the Pyrmont Peninsula, and are expected to enhance the streetscape associated with the site. The proposed facades are also expected to respond to local environmental conditions, including wind, water, solar heat and glare, resulting in a design which controls the requirements for heating and cooling in a responsible and compliant manner. Refer to Façade Report prepared by TTW and provided at Appendix MM. ◆ The proposed design is a result of a robust design excellence process. ◆ Accordingly, it is concluded that the Proposal will create a high-quality development of architectural merit that will enhance the streetscape and public domain of Pyrmont, and make a positive contribution to the surrounding urban context. 	Design Development and Ongoing.
Visual Impact	<ul style="list-style-type: none"> ◆ The Proposal will impact private and public open space and impact nearby residential properties. 	<ul style="list-style-type: none"> ◆ A detailed and thorough Visual Impact Assessment has been undertaken by Architectus to support the Proposal. The VIA has been undertaken in accordance with the requirements of the SEARs as well as the LEC Planning Principles for view assessment. This assessment has considered impacts on public domain views, private views, and cumulative impacts on these views, and concludes that the view impacts as a result of the Proposal are reasonable and acceptable. In accordance with accepted Planning Principles, the existing urban context, and the strategic future context of the site. Accordingly, it is concluded that the Proposal will have a reasonable and acceptable environmental impact in terms of views. ◆ To improve the view sharing outcomes, the design has adopted an inset within the lower-portion of the tower to help provide a greater 'gap' for private views along the axis of John Street. ◆ With regard to the views from the Astral Residences views it is notable that the currently Proposal has reduced significantly in height facing Pirrama 	Construction and Ongoing.

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		Road from the design competition winning scheme to the final Proposal.	
Traffic and Car Parking	<ul style="list-style-type: none"> ◆ Increase in traffic congestion from construction and ongoing use due to an increase in visitors and workers to the area. 	<ul style="list-style-type: none"> ◆ A detailed Traffic Impact Statement has been undertaken by Mott MacDonald's as per the TIS conclusions, there is adequate car parking capacity onsite to accommodate the cumulative increase in demand arising from Mod 14 and the non-tower component of Mod 13. A car stacker with access from the internal service road has been proposed to accommodate the parking demands arising from residents, visitors and hotel guests of the Ritz-Carlton hotel and residential tower. This response is considered adequate to mitigate any adverse impacts on surrounding on-street parking for increased parking demand arising from the Proposal. The proposed car parking will not exceed the 3,000 spaces are outlined in Major Project Approval. ◆ The addition of the Pyrmont Street Car Park Entry will mitigate adverse impacts on the surrounding intersections by redirecting traffic flow along Pyrmont Street. ◆ The site is well serviced by a number of public and active transport options, enabling visitors, patrons, staff, and residents to use these services to travel to and from the site. In addition, bicycle parking facilities are also proposed, which will contribute to a decreased reliance on car ownership for users of the site, further reducing parking demand on the site in relation to the proposed development. ◆ To support the proposed transport interchange improvement works and additional bicycle parking, a Draft Green Travel Plan has been prepared and is provided at Appendix WW. This will be updated and provided to the DP&E prior to the commencement of construction and to be implemented prior to occupation. This Draft Green Travel Plan outlines the provision of end-of-trip facilities and a series of initiatives to improve the sustainable travel choices for staff and visitors travelling to The Star. Further, end of trip facilities will be provided for workers. ◆ Accordingly, parking demand is not anticipated to result in any adverse environmental impacts in relation to the Proposal, as well as the site and surrounding areas. Further, given that the existing public transport networks and services either have spare capacity or will not be affected by Mod 13, the Proposal is anticipated to have a positive impact in terms of public transport patronage, and consequently minimise impacts on car traffic within the local area. 	Construction and ongoing.
Loading Dock Management	Increase in loading and unloading movements, without a restriction on hours of operation and increase in truck traffic on local streets.	<p>A Loading Dock Management Plan has been prepared by Change Logic (Appendix JJ) to manage any adverse impacts of the loading dock operations, and provides management measures under the following headings:</p> <ul style="list-style-type: none"> ◆ Operational Policy; 	Ongoing

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<ul style="list-style-type: none"> ◆ Delivery and Loading; ◆ Hours of Operation; ◆ Dock Traffic Management and Scheduling; ◆ Material Handling Equipment; ◆ Vehicle Routes; ◆ Pedestrian and Vehicle Safety; ◆ Work Health and Safety; and ◆ Security. <p>The proposed upgrades to the Star Events Loading Dock, the extension of its operating hours, as well as the loading dock upgrades that have been proposed as part of Mod 14 will ensure that the increased demand for loading dock space as a result of the Proposal will be adequately accommodated. In addition, it is anticipated that the management measures within the Loading Dock Management Plan will adequately mitigate any environmental impacts during the operational phase of the Proposal.</p>	
ESD	<ul style="list-style-type: none"> ◆ Compliance with NatHERS and BASIX (residential component only). ◆ Compliance with National Construction Code (NCC) 2016 Section J Energy Efficiency (all non-residential components of the project). ◆ Impacts relating to energy efficiency, carbon emissions and ongoing operation costs. ◆ The Proposal will not respond to climate change and not be adaptable to climatic variation i.e. climate change impacts. 	<p>A detailed and thorough Sustainability Report has been undertaken by WSP to support the Proposal. The project is currently being registered with the Green Building Council of Australia for certification. This Sustainability Report has identified the following key findings/conclusions and recommendations:</p> <ul style="list-style-type: none"> ◆ The development can achieve Australian Excellence sustainability outcomes; ◆ The development achieves compliance with BASIX and NatHERS compliance for the residential dwelling components of the development as evidenced by Appendix A, B and C of the Sustainability Report (Appendix Z); ◆ The development can achieve compliance with NCC Section J1 Building Fabric and Section J2 Glazing through the use of a high thermal performance building envelope for all non-residential component of the development; ◆ The Ritz Carlton Hotel can achieve a NABERS for Hotels energy rating of 5.5 Stars and a NABERS for Hotels water rating of 4 Stars during operation; and ◆ The Ritz Carlton Hotel and Residential Tower is targeting a 5 Star Green Star rating through the GBCA's Green Star Design and As Built rating tool, which will provide third party verified sustainability outcomes for the project. 	Construction

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<ul style="list-style-type: none"> ◆ Incorporation of ongoing sustainability initiatives on the site including rainwater harvesting system, mechanical system operation, harbour heat rejection system, photovoltaic cells, VSD updates to fans and pumps, vertical transportation upgrades, energy sub-metering and water sub-metering. ◆ The adaptation measures outlined in the Climate Risk Assessment prepared as part of the Climate Adaptation Plan outlined within the Sustainability Report will reduce the impacts of potential climate change risks from extreme or high to medium or low level risks. 	
Heritage and Aboriginal Heritage	◆ Impacts to the SELS Buildings and Aboriginal Heritage.	<ul style="list-style-type: none"> ◆ The HIA (Appendix R) concludes that there are no physical works proposed to the SELS building and therefore limited heritage impacts have been identified. However, in accordance with the Conservation Management Plan for the SELS building, a Heritage Interpretation Strategy and Implementation Plan will be prepared before the issue of the relevant Construction Certificate. Overall the proposed works are supported from a heritage perspective. ◆ To mitigate visual impacts on the surrounding heritage stock in terms of character the following design decisions were made during the design development of the tower: <ul style="list-style-type: none"> - The entrance to the Ritz Carlton would not notably change the existing envelope of The Star and is generally in keeping with its existing character. The contemporary form constituting the ground floor awning over the entrance is of an appropriate scale and has an appropriate separation from all identified heritage items that it would not detract from their setting; - The proposed scheme appropriately proposes an expressed podium. The podium is expressed both through form and materiality; - Sandstone characterises the area. It is visible in the natural environment including in the escarpment to the north of the site, and in the built environment including in the art nouveau details comprised within The SELS. The use of sandstone in the tower podium is sympathetic to the character of the area and ensures that a relationship between the old and new fabric is retained. Further, it is proposed to use either sandstone or profiled aluminium in a sandstone colour in the spandrel panels on the tower. These spandrel panels would sympathetically reduce the void to solid ratio comprised in the tower; - The podium element is proposed to be clad in a sheer glass wall. Sculptural timber mullions are proposed to reduce the void to solid ratio to articulate the façade and reduce visual impact on the proximate items; and 	Construction.

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<ul style="list-style-type: none"> - There is a substantial amount of vegetation proposed to the development overall in the form of 'green-belts'. These belts further articulate the façades, emphasise the podium element and constitute a sympathetic neutral element in the context of the contemporary fabric in an early setting. ♦ The AHAA concludes that the site is considered to have very low to nil archaeological potential; no mitigation measures are proposed. 	
Geotechnical	<p>Footing design, excavation retention, rock face support, excavation induced ground movements, lateral restraint, and additional geotechnical investigations.</p>	<p>A Geotechnical Assessment has been prepared by JK Geotechnics, the Assessment recommends the following additional investigations to be undertaken:</p> <ul style="list-style-type: none"> ♦ Following demolition of the existing building, it is recommended that deep cored boreholes be completed at each heavily loaded column in order to optimise the design bearing pressures. In addition and for preliminary design purposes, it is recommended that three cored borehole be completed around the existing building to assess the subsurface conditions at depth as well as the groundwater characteristics. ♦ Within the soil profile, Standard Penetration Tests (SPT) should be completed at no more than 1.0-1.5m depth intervals to assess the relative compaction/strength of the subsoil profile. Bedrock must be diamond core drilled to at least 6m below bulk excavation level. The depths of the cored boreholes below bulk excavation level may need to be significantly increased if tie-down anchors are proposed. ♦ Insitu Packer testing should be completed in the three preliminary cored boreholes to assess the permeability of the bedrock at various levels. In these three boreholes, monitoring wells should be installed and sealed at different levels within the sandstone bedrock to monitor groundwater levels and quality, and also for the purpose of completing pump-out tests to assess inflow rates. Adjacent to each of the three preliminary boreholes, an adjacent borehole should be drilled to the bedrock surface for the purpose of installing a second groundwater monitoring well. Groundwater sampling and analysis from these six boreholes will be required to satisfy DPI Water, and also to assess salinity. ♦ Groundwater level monitoring of all wells must be carried out to assess the design head of water for a tanked basement. The monitoring period should include heavy and prolonged rainfall events. Groundwater modelling and seepage analyses should then be completed to assess inflow rates into the proposed excavation. ♦ The geotechnical investigation report would need to contain detailed advice on retention systems, groundwater quality and dewatering, excavation, excavation induced ground movements, footings, including total and differential settlements, and the lowest basement floor slab. We recommend that 3D Plaxis (finite element) analyses be carried out to model the rock-structure interaction. ♦ A waste classification will need to be assigned to any soil excavated from the 	Construction

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		site prior to offsite disposal. Subject to the appropriate testing, material can be classified as Virgin Excavated Natural Material (VENM), General Solid, Restricted Solid or Hazardous Waste. The waste classification assessment should be carried out concurrently with the detailed geotechnical investigation (post-demolition) so that the appropriate samples are obtained from the geotechnical boreholes.	
Contamination	<ul style="list-style-type: none"> Contamination is uncovered during demolition and construction phase. 	<ul style="list-style-type: none"> There is a low likelihood of significant contamination being present on the site. An Environmental Management Plan will be prepared for all works in Mod 13 and will include a waste management strategy for the construction phase of the development including details of the appropriate removal of materials from the site (including any asbestos uncovered during demolition and construction phase) and excavation material. 	Construction
Air and Odour	<ul style="list-style-type: none"> Dust emissions during construction. Air quality during construction. Nitrogen dioxide (NO2) as a result of the carpark's ventilation system. Odour as a result of operation of the commercial ventilation system. NO2, sulphur dioxide (SO2), carbon monoxide (CO), total volatile organic compounds (tVOCs) and particulate matter less than 2.5 microns in diameter (PM2.5) from the gas turbines. 	<p><u>Dust emissions during construction:</u></p> <ul style="list-style-type: none"> Dust issues associated with demolition and construction activities are unlikely to occur due to the types of construction activities planned and management practises to be implemented by the construction manager onsite. Any issues that are to arise will be controlled with mitigation measures. <p><u>Air quality during construction:</u></p> <ul style="list-style-type: none"> It is anticipated that the Proposal will not have an adverse impact on air quality. It is considered that dust issues associated with demolition and construction activities can be adequately managed through implementation of management measures to be incorporated into the detailed Construction Management Plan to be prepared prior to issue of the relevant construction certificate. Regarding air quality, no surrounding activities were deemed to impact upon The Star. <p><u>NO2 from carpark ventilation system:</u></p> <ul style="list-style-type: none"> A qualitative assessment for impacts to air quality as a result of the car stacker's basement carpark ventilation system determined air quality and odour impacts would be unlikely, due to incorporation of ventilation control technologies. <p><u>Odour:</u></p> <ul style="list-style-type: none"> A qualitative assessment for impacts to air quality as a result of the commercial exhaust determined air quality and odour impacts would be unlikely, due to incorporation of ventilation control technologies. 	Construction and Ongoing.

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<p><u>Emissions:</u></p> <ul style="list-style-type: none"> ♦ Air quality emissions associated with the proposed 6 gas turbines were modelled at 10 discrete sensitive receptors for NO₂, SO₂, CO, tVOCs and PM_{2.5}. Four additional receptors were assessed using contours of one hour NO₂ cumulative impacts. The results indicated that the air quality criteria was met at all sensitive receivers. 	
Noise	<ul style="list-style-type: none"> ♦ Increase in entertainment noise from patrons and music. ♦ Mechanical plant and operational noise. ♦ Noise ingress on the development. ♦ Traffic noise. ♦ Light rail noise and vibration. ♦ Construction noise and vibration. ♦ Ongoing noise and vibration. 	<p>It is anticipated that environmental impacts relating to mechanical and plant noise, patron and music noise, cumulative road traffic noise, and noise egress can be adequately mitigated and managed in accordance with the recommendations listed below:</p> <p><u>Increase in entertainment noise from patrons and music:</u></p> <ul style="list-style-type: none"> ♦ In order to achieve the noise criteria for entertainment noise, the noise levels of patrons and music must be equal to or lower than the noise levels detailed by WSP. If required, acoustic mitigation shall be provided, these measures may include siting and location of areas, acoustic screens or barriers, partial or full enclosure; number of speaking, sound level limiters, acoustic louvres and acoustic absorption and reverberation control. <p><u>Mechanical plant and operation noise:</u></p> <ul style="list-style-type: none"> ♦ During the detailed design process, consideration must be made for the selection and design of all mechanical equipment that emits noise. If selected equipment is in excess of these criteria or the noise levels vary from those detailed in the WSP Noise and Vibration Impact Assessment, additional assessment shall be carried out and acoustic mitigation measures shall be provided. These measures may include, but are not limited to: <ul style="list-style-type: none"> - Siting and location of plant rooms and equipment - Attenuators - Noise barriers - Acoustic louvres, and - Acoustic absorption to plant rooms <p><u>Noise ingress on the development:</u></p> <ul style="list-style-type: none"> ♦ In order to minimise noise ingress into the development, WSP has provided indicative glazing performance recommendations for the hotel and residential sleeping areas. The calculations indicated that the internal noise levels would not be able to be met with windows open for the residential units. 	Construction and Ongoing.

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<p>Where facades are closed, or operable windows are required to be closed to meet internal noise limits, ventilation requirements will be met through mechanical ventilation solutions and attenuated natural ventilation paths. This will be done through a combination of ducted façade louvres and trickle vents in the spandrel which will include appropriate acoustic treatment as detailed in the Mechanical Services report and Architectural drawings.</p> <p><u>Traffic Noise:</u></p> <ul style="list-style-type: none"> Any increases as a result of the development should be limited to no more than 2dBA above the existing traffic noise level. WSP's analysis of data provided by Mott MacDonald confirms that the anticipated increase in traffic will not trigger a traffic noise level increase of more than 2dBA. <p><u>Light rail noise and vibration:</u></p> <ul style="list-style-type: none"> it is expected that no additional mechanical links will be provided to the light rail vibration source. Therefore, no additional vibrational impacts are expected for the Proposal. <p><u>Construction noise and vibration:</u></p> <ul style="list-style-type: none"> To enable low impact internal works within the building that are expected to have no adverse impact on nearby residents, WSP recommends the following condition regarding internal construction: <p><i>All works internal to the existing building, including building/demolition and excavation work, in connection with the proposed development can be carried out on a 24-hour basis, 7 days per week, with safety inspection being permitted at 7.00am on work days.</i></p> To minimise human exposure to whole-body vibration, compliance with AS 2670-2 "Evaluation of human exposure to whole-body vibration – Part 2: Continuous and shock induced vibration in buildings" is recommended, in accordance with Table 6.2 of WSP's Noise and Vibration Assessment. Construction noise from the Proposal to be managed and assessed in accordance with the Interim Construction Noise Guidelines as detailed in the Noise and Vibration Impact Assessment. No ground born noise is to be created between 6pm and 7am on any day of the week. To ensure human comfort (amenity) the maximum vibration values outlined in Assessing Vibration: A Technical Guideline (DEC, 2006) should be considered. During the detailed design process, consideration must be made for the selection and design of all mechanical equipment that emits noise. If selected equipment is in excess of these criteria or the noise levels vary from 	

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<p>those detailed in the WSP Noise and Vibration Impact Assessment, additional assessment shall be carried out and acoustic mitigation measures shall be provided.</p> <p><u>Ongoing noise and vibration:</u></p> <ul style="list-style-type: none"> ◆ Prior to the issue of the relevant Occupation Certificate, the Operational Noise Management Plan is to be updated to incorporate measures outlined in WSP's Noise and Vibration Impact Assessment. 	
Drainage, Flooding & Stormwater	<ul style="list-style-type: none"> ◆ Excavation resulting in contaminated groundwater. ◆ Water supply, sewer drainage, natural gas supply and stormwater. ◆ Water usage and quality, wastewater management, stormwater management and WSUD. ◆ Flooding impacts. 	<p>A Hydraulic Infrastructure Report (Appendix BB) has been prepared by UMOW LAI addressing water supply, sewer drainage, natural gas supply and stormwater. To accommodate the works proposed as part of Mod 13, this Hydraulic Infrastructure Assessment has identified the following key findings/conclusions and recommendations:</p> <ul style="list-style-type: none"> ◆ A new water main connection is proposed to meet the increased demand associated with the Mod 14 & Mod 13 developments. The proposed 150mm main connection will extend from the Pirrama Road 250mm SWC water main. ◆ A new sewer main connection is proposed to meet the increased demand associated with the Modification 14 & 13 developments. The proposed 300mm sewer connection will extend from the Pirrama Road 375mm SWC sewer main. ◆ A new Natural Gas (NG) meter and regulator assembly will be required to accommodate the increased NG demand. Preliminary discussions with Jemena suggests that the required gas demand is available in the local network. ◆ The existing site stormwater infrastructure has adequate capacity to drain the proposed new build areas. The catchment area for the site will not change with the proposed development; therefore there will be no increased stormwater flows for the site. ◆ The existing disused northern stormwater harvesting tank is to be reinstated. New drainage from MOD 13 areas will be diverted where practical to the reinstated harvesting tank. ◆ Install new rainwater pumps and filtration equipment at level B4 and interface with the existing site recycled flushing water distribution system. ◆ New building area catchment will be directed to either the northern or southern collection systems, and utilise the existing stormwater quality treatment devices. ◆ Any new groundwater collection systems will discharge collected groundwater to the stormwater outflow via the northern seawater conduit. 	Construction and ongoing.

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<ul style="list-style-type: none"> Should any contamination of groundwater be observed during planning and construction appropriate treatment systems will be provided to the collection system. <p>A Water Management Report (Appendix CC) has been prepared by UMOW LAI addressing water usage and quality, wastewater management, stormwater management and WSUD. This Water Management Report proposes the following recommendations and mitigation measures:</p> <ul style="list-style-type: none"> Water efficient fixtures and fitting selection. Water meters with BMS connection will be installed at all major water use area for hot and cold and recycle water services. The recycled water system will be extended to the proposed Mod 13 development areas for public amenity WC flushing. The existing disused northern stormwater harvesting tank is to be reinstated and new drainage from Mod 13 areas to be diverted where practical to this tank. Rainwater collected shall be directed to interface with the existing site recycled flushing water distribution system. Install new rainwater pumps and filtration equipment at Level B 4 and interface with the existing site recycled flushing water distribution system. New area catchment will be directed to either the northern or southern collection systems, and utilise the existing stormwater quality treatment devices. <p>A Flood Impact Assessment (Appendix DD) has been prepared by TTW. The report concludes that the proposed flood mitigation works will have a positive impact on the site and surrounds as it will reduce the floor level, depth of ponding and hazard around the development site, ameliorate the flood risk to the development site, adjacent existing properties and to the public.</p>	
Prescribed Airspace for Sydney Airport	<ul style="list-style-type: none"> Impact on the operation of Sydney Airport. 	Given the conclusions of the Airspace Assessment, no adverse impacts on the operation of Sydney Airport are anticipated as a result of Mod 13. The Proposal will be of an appropriate height and cranes within the specified height, refer to the Architectural Plans in Appendix B .	Construction.
Social Impact	<ul style="list-style-type: none"> Impact of the Proposal on safety and security. Impact of the proposed Neighbourhood Centre on existing community facilities in Pyrmont. Increase in the number of patrons and visitors may increase the perception that the area of venue is unsafe, particularly when combined 	<p>The SIA prepared by Urbis (Appendix M) concludes that the Proposal will generally have a positive social impact on the area, noting that Proposal does not increase gaming floor space, and the positive impact of the neighbourhood centre. The following mitigation measures have been recommended:</p> <ul style="list-style-type: none"> Development of a CPTED Strategy for all casino interfaces with the street and public domain areas; 	Ongoing

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
	<p>with an increase in venues that serve alcohol.</p> <ul style="list-style-type: none"> ◆ Increase in patron numbers. ◆ Cumulative construction impact of Mod 13 and Mod 14. 	<ul style="list-style-type: none"> ◆ Ensure continued implementation of existing safety and security measures, including roving security patrols, security camera coverage on all perimeters, and management at taxi ranks; ◆ Implement the recommendations of Acoustic Technical Report; ◆ Implement the requirements of the Lighting Technical Report on security and safety; ◆ Develop a clear model around governance, and facilities management, including strategies for book procedures, hire processes, fees, access, and maintenance. This could also include opportunities for local community members to become members of a managing or reference committee; ◆ Continue to implement existing safety and security measure, including security patrols and CCTV coverage, and adherence to Plans of Management; ◆ Continue to ensure the implementation of RSA and RSG procedures; ◆ Promote and demonstrate The Star's commitment to RSA procedures and responses to anti-social behaviour in public forums to inform public perceptions; ◆ Continue to abide by ILGA Gaming Signage and Brochure standards (including in languages other than English); and ◆ Continue to engage with the community to keep them informed on decisions to reduce risk and anxiety about the redevelopment process. <p>It is anticipated that any adverse social impacts relating to construction can be adequately managed through a detailed Construction Management Plan to be prepared prior to the issue of the relevant construction certificate. A draft Construction Management Plan has been included at Appendix HH.</p>	
Safety and Security	<ul style="list-style-type: none"> ◆ Proposal impacts perceptions of safety. 	<p>Given the conclusions of the CPTED Assessment, it is anticipated that the Proposal will have a positive impact on the safety and security of the site and the surrounding area provided the recommendations below are adopted during the detailed design, construction and operation of the development.</p> <ul style="list-style-type: none"> ◆ Installation of CCTV throughout all external and internal publicly accessible areas; ◆ All lighting to be implemented as per the requirements of the Site-Wide Lighting Management Plan (Appendix T); ◆ Design surveillance measures at the access points to the car stacker and inside the car stacker to ensure the safety of this area; 	Ongoing

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<ul style="list-style-type: none"> ◆ Ensure landscaping does not hinder line of sight and perceptions of safety, particularly in areas where there is little natural surveillance (such as Jones Bay Road); ◆ Update Operational Plans of Management to include the redeveloped Ribbon, hotel and Neighbourhood Centre; ◆ Implement adequate and appropriate mechanisms and procedures in place to control access to the different users of The Star; ◆ Implement clear signage and way finding to publicly accessible areas; ◆ Development of a plan of management for the neighbourhood centre around governance, and facilities management, including strategies for book procedures, hire processes, fees, access, and maintenance to reduce conflict between users of the Neighbourhood Centre; ◆ Staff and security to continue to report non-domestic assaults to police to continue to enhance the reputation of The Star to reduce fear and perceptions of crime; and ◆ Updated Operational Plans of Management to include the hotel, Ribbon, Sky Bar, and Neighbourhood Centre. <p>Given the conclusions of the CPTED Assessment, it is anticipated that the Proposal will have a positive impact on the safety and security of the site and the surrounding area provided the recommendations above are adopted during the detailed design, construction and operation of the development.</p>	
Special Event Lighting Impacts	Disturbance to the local road network, neighbourhood and surrounding residents.	<p>It is anticipated that the special events will not have an adverse environmental impact on the surrounding residential and other uses provided the management measures are implemented during the operational phase of the development. In accordance with the recommendations, a Master Lighting Control system will be implemented prior to occupation to allow for centralised control of all external lighting including event lighting.</p> <p>An assessment of the external lighting confirming the illuminance levels and luminous intensity levels in accordance with AS 4282 as well as the guidelines and parameters provided within the Lighting Management Plan will be provided during the design phase and prior to Construction Certificate.</p> <p>Given the above, it is anticipated that any adverse lighting impacts as a result of the Proposal can be adequately managed through the recommendations listed below:</p> <ul style="list-style-type: none"> ◆ A Master Lighting Control system to allow for centralised control of all external lighting including event lighting. ◆ The Lighting Management Plan provides lighting performance guidelines, these guidelines also provide recommendations to mitigate environmental impacts relating to the proposed lighting, covering the following: 	Ongoing

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<ul style="list-style-type: none"> - The relevant Australian Standards and Minimum Performance guidelines that apply to exterior illumination and need to be complied with; - Lighting Design Guidelines; - Property-wide Lighting Design Coordination - recommendations to support the integration of the exterior lighting across the property and enhance a cohesive night-time experience; - Recommendation to hire a specialist lighting designer to undertake the lighting design work on the property, and relevant qualification requirements; - Lighting controls including a master lighting control system to allow centralised control of all external lighting including even lighting; - Energy Efficiency and Environmental Considerations; - Safety and Security; - Glare and Light Spill; and - Maintenance. 	
Special Events Traffic	Disturbances to local road network.	Mod 13 does not propose to increase the frequency or impacts of special events generated by The Star. Therefore, it is anticipated that the 5 Class 1-4 special events that will take place each year will not have an adverse environmental impact on the surrounding residential and other uses during the operational phase of the development, beyond that which has already been approved under MP08_0098 and subsequent modifications (including Mod 14).	
Construction Impacts	<ul style="list-style-type: none"> ◆ Construction noise and vibration. ◆ Construction hours. ◆ Construction traffic and pedestrian management. ◆ Construction air quality. ◆ Construction staging. 	<ul style="list-style-type: none"> ◆ The appointed Contractor should prepare a comprehensive Construction Environmental Management Plan (CEMP) for approval prior to undertaking any work on the site. <p><u>Construction Noise and Vibration:</u></p> <ul style="list-style-type: none"> ◆ A Construction Noise and Vibration Management Plan (CNVMP) should be prepared by the Managing Contractor covering noise, ground vibration, and submitted to the certifying authority prior to the issue of the relevant construction certificate <p><u>Construction Hours:</u></p>	Construction

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<ul style="list-style-type: none"> ◆ The hours of construction, based on existing consent conditions (MP08_0098), will be: <ul style="list-style-type: none"> - 0700 to 1730 Monday to Friday (inclusive); - 0800 to 1500 Saturday; and - No work on Sundays or Public Holidays. ◆ Additionally, approval will be sought under Mod 13, to undertake internal, non-noise generating works, on a 24/7 basis. <p><u>Construction Traffic and Pedestrian Management:</u></p> <ul style="list-style-type: none"> ◆ SEGL to restrict on-site parking for workers to 200 spaces. These spaces will be controlled using a booking system and parking above this threshold will be actively discouraged through on-site parking fees. ◆ SEGL to continue to encourage construction workers to take advantage of the excellent public transport access. ◆ SEGL to install bike parking upgrades as early works in Mod 13, to improve cycle parking opportunities during construction. <p><u>Construction Air Quality:</u></p> <ul style="list-style-type: none"> ◆ Vehicles and plant/equipment should be fitted with appropriate emission control equipment and be serviced and maintained in accordance with the manufacturers' specifications. ◆ Loads comprising loose material entering or leaving a site should be covered. ◆ Dusty activities should be dampened, particularly during dry weather. ◆ Drop heights for materials should be minimised to control the fall of materials. ◆ The number and size of stockpiles should be minimised. Stockpiles should not be located close to the site boundary possible, and should take into account predominant wind directions. Where possible and feasible, stockpiles should be covered or enclosed and protected from the wind. ◆ Cutting of materials such as concrete slabs or bricks should be undertaken with extraction or suppression where possible. Pouring water over material 	

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
		<p>as it is being cut can greatly reduce the amount of dust generated.</p> <ul style="list-style-type: none"> ◆ Skips should be securely covered. ◆ Materials should be removed from site as soon as practicable. 	
Reflectivity	<ul style="list-style-type: none"> ◆ External glare has an adverse impact to motor vehicles travelling toward the development along the adjacent public roadways. 	<ul style="list-style-type: none"> ◆ The Proposal has been designed to address the recommendations of the Solar Reflectivity Assessment (Appendix GG) prepared by CPP, in addition to TTW's Façade Report at Appendix MM and the Architectural Design Statement at Appendix C. It is anticipated that FJMT's choice of low reflectivity glazing and finishes in accordance with the glazing reflectivity specifications recommended by CPP will minimise the potential for any adverse reflectivity or glare impacts on the adjacent roads as a result of the Proposal. ◆ CPP provided the following recommendations for the external glazing to minimise disability glare to motor vehicles travelling towards the development along the adjacent public roadways: <ul style="list-style-type: none"> - The external glazing over the western and northern podium façade to have a reflectivity coefficient of 12-15%, - The report notes that certain building materials other than glass, including metallic framing and supports, produce diffuse components of reflection and have potential to produce discomfort glare. To avoid discomfort glare, CPP recommends that all non-glazed surfaces utilise low lustre, textured finishes with a reflectivity coefficient of less than 20%; and - To minimise potential for nuisance solar glare impacts, CPP recommends that external glazing proposed on any other curved façade elements within the Proposal should have a reflectivity coefficient of 10%. ◆ The reflectivity of the building has been considered with the resulting material selections made to predictably reduce reflectivity below mandated local requirements. The proposed glazing has also been benchmarked against existing glazing and has found to a similar or lower reflectivity to what is already installed. The Proposal will not result in any adverse reflectivity or glare impacts on the adjacent roads, as FJMT have chosen low reflectivity glazing and finishes in accordance with the recommendations of the Solar Reflectivity Assessment prepared by CPP. ◆ CPP, FJMT and TTW are in agreement with the recommendations in this report, and have adopted the recommendations in the building design. 	Design Development and Construction

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
Wind	<ul style="list-style-type: none"> Undesired pedestrian level wind environment in and around the proposed development. 	<p>CPP concludes that adopting the amelioration recommendations in the report would deem the areas identified in the report as having adverse wind impacts suitable for the intended purposes. FJMT has worked with CPP to incorporate these amelioration recommendations within the Proposal to ensure user and pedestrian comfort is maximised. Given the Proposal responds to CPP's recommendations, no adverse wind impacts are anticipated for or by the Proposal.</p>	Design Development and Construction
Fire Safety	<p>Fire & Rescue operations Fire life safety</p>	<ul style="list-style-type: none"> Fire protection measures to be in accordance with the recommendations of the Fire Protection Assessment at Appendix X, the BCA and the performance based solutions addressed in the Fire Engineering Assessment at Appendix Y. Fire Engineering Reports for each relevant stage of the development to be completed prior to issue of the relevant interim Occupation Certificate. An amalgamated Fire Engineering Report to be completed prior to issue of the final Occupation Certificate. 	Design Development, Construction and Ongoing
Waste	<ul style="list-style-type: none"> The Proposal will generate excessive construction and operational waste. 	<p>It is anticipated that the recommendations listed below can be incorporated into the development as part of the design detail phase, and will result in a positive environmental impact in terms of waste management.</p> <ul style="list-style-type: none"> General waste should be collected by an accredited private waste contractor with disposal off site to an approved and registered land fill facility. Commingled recyclables should be collected by an accredited private waste contractor with disposal off site to an approved recycling and resource recovery facility. Collection of baled paper and cardboard packaging is to be performed by a dedicated paper recycling contractor. Separated glass containers are to be collected by a dedicated glass recycling contractor, and processed at an approved glass recovery and recycling facility. Records of disposal should be provided in a summary report to The Star on a minimum quarterly basis as a contract condition for all private waste contractors engaged. Disposal records should include weight, type of stream, collection and disposal date and disposal destination as a minimum, sufficient for purposes of auditing. Requiring these records will provide assurance that correct disposal and resource recovery is taking place, and allow for ongoing monitoring and feedback on how the waste system is performing. The Waste Management Plan also provides guidelines on bin storage, signage, and monitoring which should be satisfied in relation to operational waste management for Mod 13. 	Construction and Operational

Environmental Impact	Potential Impact	Mitigation/Management Recommendation or Comment	Stage of Development
Trees	<ul style="list-style-type: none"> ◆ Trees of high value will be removed. 	<ul style="list-style-type: none"> ◆ The recommended tree protection measures addressed in the Arboricultural Impact Assessment report should be adopted during construction of Mod 13; ◆ Where trees are proposed to be removed to accommodate the proposed development, consideration should be given to planting new trees within appropriate areas of the site in accordance with the recommendations within the Arboricultural Impact Assessment report. 	Construction

11 CONSIDERATION AGAINST SECRETARY ENVIRONMENTAL ASSESSMENT REQUIREMENTS

This section of the EAR provides a summary of the environmental assessment under the headings set out in the SEARs at **Appendix A**.

11.1 SEAR 1

11.1.1 Relevant EPIs, Strategies, Plans and Guidelines

The EAR has assessed the Proposal against all the relevant EPIs, Strategies, Plans and Guidelines mentioned in SEAR 1. This is set out in **Section 6**.

Section 11.1.2 below provides a comprehensive summary of environmental assessment carried out **Section 9** and the mitigation measures set out in **Section 10** in order to “*demonstrate that the Proposal has limited environmental impacts beyond those already assessed for project approval MP08_0098 and any subsequent modifications to that approval*”.

11.1.2 Limited Environmental Impacts and Positive Benefits delivered by Mod 13

This section provides a summary of each aspect of the Proposal that has a potential impact (i.e. visual, traffic, noise, social, etc.), and will recapitulate:

- ◆ The merit assessment and its findings;
- ◆ The potential positive, neutral, or negative environmental impact of the Proposal compared with the Approved Project; and
- ◆ Whether the potential negative environmental impacts can be limited through mitigation measures.

This section draws together the individual conclusions of environmental impacts and provides an overall conclusion on the potential environmental impacts of the Proposal beyond that assessed for the Approved Project.

The following aspects of the Proposal will result in a neutral environmental impact:

◆ **Overshadowing and Daylight Access**

The architectural form of the tower, podium and ribbon elements have been designed as a slender structure that casts a fast-moving shadow. The design ensures that there will be no prolonged loss of solar access at any particular location, and that solar access is maximised to Union Square and Pyrmont Bay Park. The Proposal, in comparison with the Approved Project, will result in minimal reduction in solar access to Union Square over a 12-month period, with no impact over core lunch hours.

The location and design of the tower and its slender form, minimises shadowing to neighbouring properties and public open space. The daylight impact analysis prepared by FJMT confirms there are only three instances where solar access to any part of a neighbouring apartment is reduced to below two hours between 9 am and 3 pm in mid-winter. In each instance, FJMT’s analysis concludes that two hours of sun access will be maintained the living room and balcony of these apartments.

Given the above findings, it is concluded that the Proposal will have negligible overshadowing and daylight access impacts.

◆ **Wind Impacts**

CPP have concluded that the amelioration recommendations contained with the Pedestrian Wind Environment Assessment would deem all areas of the Proposal suitable for their intended purpose. FJMT and CPP have worked collaboratively to present a design so that no adverse wind impacts will be generated by the Proposal external to the site, beyond the impacts already assessed under the Approved Project.

Further, the proposed balance of site awnings have been identified as being beneficial to the surrounding public

domain by providing additional shielding from wind-driven rain to the covered area.

Accordingly, no adverse wind impacts are anticipated as a result of the Proposal.

◆ **Heritage Impacts**

The proposed extent of work within proximity to or on the SELS building is limited to public domain works immediately to the north of the site and the attachment of LED lighting to the exterior walls. No physical works are proposed to the interior of SELS, nor any addition and alterations that would modify the existing built form or heritage significance.

The location of the tower, podium and ribbon elements have had regard to the SELS building and nearby heritage items including the Pymont Conservation Area.

The Proposal is supported from a heritage perspective, as it will not affect the visual integrity or interpretation of the SELS building. Further, the balance-of-site works are considered to be minor and will not change the character of The Star or have a detrimental visual impact on the SELS building or other nearby heritage items.

FJMT, DWP and Urbis have worked collaboratively to minimise and remove the potential for adverse heritage impacts to arise from the Proposal above those impacts already assessed under the Approved Project.

◆ **Aboriginal and Historical Archaeology**

Urbis has assessed the archaeological potential of the site based on a review of the history of the area, previous archaeological studies and analysis of past disturbances of the site.

Based on the level of site disturbance from the Approved Project and former Pymont Power Station the potential for any intact Aboriginal archaeological site or objects being located on site is very low to nil.

Similarly, due to the level of site disturbance, including the extent of excavation to accommodate the current basement structure it is very unlikely that any sub-surface historic structure still exists on the site, such as wells or cesspits.

Based on the above, it is unlikely that the Proposal will impact or uncover any Aboriginal or historical undocumented site or items.

◆ **Water Quality: Marine Ecology**

The site is served by an existing harbour heat rejection (HHR) system comprising a water intake point in Jones Bay Road, a heat exchanger and pumping system within The Star's basement, and a water discharge point in Pymont Bay.

Under Mod 14, the system was approved to be upgraded to accommodate the projected increase in loads over a number of years, including development relating to the Proposal without the need for further upgrades to the HHR system. The works proposed as part of Mod 13 will be connected to the site's central energy plant, and so utilise the site's upgraded HHR system.

The impacts of the proposed upgrades to the HHR system have been comprehensively addressed within Mod 14. The Harbour Heat Rejection advice dated February 2017 accompanying the Mod 14 Response to Submissions concluded that there will be no evident changes in environmental conditions in the harbour when the volume of harbour water used is increased progressively by 50%.

Accordingly, as there is no proposed modification to the approved HHR system, the Proposal will not alter the outcome of previous assessments. There will be no additional impact beyond that already considered and assessed under the Approved Project.

◆ **Contamination**

Contamination has been addressed in previous approvals on the site including DA 33/94 and MP08_0098. Past contamination assessments for Lot 122 and Lot 121 in DP 828957 and the State Rail Authority site have concluded that the site has been remediated or has a low likelihood to be contaminated and thereby the site does not present a risk to human health. The area of significant site disturbance as part of the Proposal is limited to the tower location in the northern portion of the site, which has been confirmed to contain no adverse levels of contamination.

Given the low likelihood of significant contamination being present on the site, it is anticipated that the Proposal will not have any impact on human health or groundwater beyond those impacts assessed for the Approved Project.

◆ **Skyview**

As the location of the proposed tower is already obstructed from view from the Sydney Observatory by trees, the Proposal is not anticipated to have any sky view impact beyond that of the Approved Project. It is noted that the proposed works do not obstruct the view to an area through which objects of interest nominated by the Observatory will pass.

◆ **Signage**

The proposed signage has been assessed against the relevant provisions of SEPP 64 as being generally consistent with the criteria specified in Schedule 1. Overall, the proposed signage is considered appropriate for the site and the Proposal, given the urban context, numerous uses on site, size of the site, and scale of the development. It is unlikely that the proposed signs will result in any adverse environmental impacts in the context of the site and surrounds.

◆ **Services**

An Integrated Infrastructure Management Plan comprising an Electrical Infrastructure Report and Hydraulic Infrastructure Report provides detail on the required upgrades and augmentation of the existing on-site services in order to support anticipated future demand.

Where increased demand is forecast for electricity, gas and sewer, appropriate consultation with providers has been undertaken and the required agency approvals are to be sought during the formal assessment and approval process. Minimal work is required regarding telecommunications services. The proposed hydraulic infrastructure works will facilitate positive environmental outcomes for the existing site and surrounding environment by reducing stormwater runoff from the site and reusing more captured rainwater within the site.

As demonstrated, the site is capable of being serviced with the proposed augmentation and upgrades in place.

The following aspects of the project will result in a limited environmental impact:

◆ **Built Form and Design**

The proposed hotel and residential tower will have a maximum height of 237 m (AHD). The proposed addition to the Approved Project will have impacts beyond the project as previously assessed.

However, the proposed built form and associated height is isolated to a discrete and comparatively small area of the site. The tower and podium have a footprint of approximately of 3,409m², which equates to 8.7% of the overall site area of 39,206 m².

The location of the tower has been chosen to respond positively to various constraints and considerations including existing buildings, heritage, transport operations, structural capacity, servicing and operational factors.

In addition, the Proposal's height, bulk and scale are consistent with other projects in the Darling Harbour / Bays Precinct which is an area of significant change within Sydney. The architectural form of the tower and podium exhibits design excellence and have been developed so that solar access to key public spaces, including Union Square and Pyrmont Bay Park is maximised.

The Proposal will result in a substantial revitalisation of the streetscape and public domain surrounding the site including the revitalisation of several entry points of the site.

Given the above, the impacts of Proposal relative to the Approved Project in terms of built form and design will be limited.

◆ **Visual Impacts – Public Domain and Private Views**

The Proposal has undergone rigorous visual impact assessment by Architectus. Key aspects of this assessment including the assumptions made, methodology and criteria by which impacts were determined have been the subject of a peer review by Richard Lamb and Associates. The peer review concluded that the framework applied is logical, comprehensive and reflective of industry best practice. Moreover, Richard Lamb recognises that owing to the criteria

developed and applied by Architectus the overall visual impact assessment is conservative in nature, leading to an over-rated impact of view impacts.

The Architectus Visual Impact Assessment provides a holistic assessment of potential impacts including a comparison of the impacts associated with the existing and approved development, as well as the Proposal (section 5 of the VIA, **Appendix H**).

Architectus undertook a detailed comparison of the Approved Project against the Proposal, in relation to existing and potential view impacts. A key element of this assessment is recognition that since The Star was declared a Part 3A Major Project in 2008 the urban context of the site has substantially changed to include Barangaroo South and the Sydney International Convention, Exhibition and Entertainment Precinct. This modified urban context, that continues to evolve, makes a direct comparison of views and assessments impossible. Importantly Architectus notes that if assessed today, taller building elements of the approved development would have a lesser visual impact than the context in which they were approved.

Notwithstanding the above, a comparison of the visual impact of the approved development against that proposed is summarised in **Figure 72**.



Notably, the potential visual catchment of the Proposal expands as a consequence of the new tower element with impacts assessed as moderate in relation to public domain views for the majority of Darling Harbour and moderate to high across the majority of the eastern edge of Darling Harbour. In comparison, the 2008 assessment resolved that public domain views for most of the eastern end of Darling Harbour and Pyrmont Bay would be moderately impacted. Architectus has demonstrates that this change is “limited” change in the context of an environmental impact as the:

- ◆ Tower and ribbon elements will not obstruct important visual elements of existing views including water, the land-water interface, public places, heritage items or landmarks.

- ◆ Proposal is consistent with the anticipated future context of the locality, with taller buildings emerging around Darling Harbour today, as well as the future development of the Bays Precinct anticipated in strategic planning frameworks.
- ◆ Impact of the Proposal on the public domain views would be limited given the context of taller buildings, both recent and future.

The impact of the Proposal on private views will also be limited because the additional height of the tower element of the Proposal will generally only obstruct views of sky above a 28 metre LEP compliant building envelope, whereas an LEP compliant building envelope would obstruct existing views of land, water, land-water interface, and land-sky interface.

In terms of private views, the Proposal will have a high impact on only 30 apartments in two buildings in the surrounding locality. The impact of the Proposal on private views is considered limited because the areas of the design which affect view loss of the most important elements (Darling Harbour, Sydney Harbour and the city skyline) for existing apartments are generally within the 28m Height of Building Control under SLEP 2012. In addition, within the context of an acknowledged area of growth within Sydney, that is also within proximity to Central Sydney, it would be unreasonable to expect that views from most residences within a street-wall building should remain unobstructed. To mitigate its impact on private views, the Proposal has adopted an 'inset' at the lower-tower levels which widens the 'gap' for private views along the axis of John Street.

The conclusions of Architectus were the subject of a peer review by Richard Lamb and Associates (**Appendix ZZ**) who has considered specifically the requires of SEAR 1 to demonstrate "limited additional environmental impact". In this regard the peer review confirms the following:

- ◆ the isolation and prominence of the existing Star development arose from the deliberate siting of the development on the western side of Darling Harbour. Other buildings within the adjacent context are equally isolated and prominent, albeit for different reasons. The new tower does not contribute to increased or different visual isolation. The VIA demonstrates that the proposed tower will not cause view loss and is not contrary to relevant standards and planning controls.
- ◆ Despite the change in the visual environment in the public domain associated with the proposed tower, the change will not have substantive negative visual impacts in relation to view loss, view sharing or access to views of scenic, or iconic or other value items within existing views.
- ◆ A building, half the height of the Proposal, would be equally as prominent and have the same effect on the visibility of scenic, iconic or other value items within existing views. Therefore, the visual prominence of the Proposal is not itself considered to result in a negative impact.
- ◆ The extent of loss associated with visual impacts in terms of view sharing for views from private residences would not be substantially different that would occur with a compliant development. Therefore, the "additional" impact would be limited.

◆ **Construction Impacts**

The construction works proposed as a part of Mod 13 have the potential for traffic, noise and air quality impacts during the construction stage of the Proposal. However, these can be managed to acceptable levels through implementing the comprehensive range of mitigation and management plans including the Construction Management Plan, the Traffic Impact Statement, the Noise Impact Assessment, the Air Quality Report, and the conditions of approval.

◆ **Lighting Impact**

In accordance with the recommendations of the Lighting Management Plan, a Master Lighting Control system will be installed and implemented prior to occupation to allow for centralised control of all external lighting including event lighting.

Further, it is anticipated that impact of the illuminated signage will be low because compliance with industry best practise design and relevant guidelines will mitigate any environmental impact.

An assessment of the external lighting confirming the illuminance levels and luminous intensity levels in accordance with AS 4282, as well as the guidelines and parameters provided within the Lighting Management Plan, will be provided during the design phase and prior to issue of the relevant Construction Certificate.

Given the context of The Star as an entertainment destination and in the context of other developments in Darling Harbour including Barangaroo and the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP), as well as the strict curfew restrictions, it is anticipated that the lighting environmental impacts of the Proposal in comparison to the Approved Project will be limited.

◆ **Reflectivity**

Sydney DCP 2012 establishes a standard with regard to reflectivity, 'generally, light reflectivity from building materials used on facades must not exceed 20%'. In accordance with the SEARs, a Solar Reflectivity Assessment was undertaken. The assessment found that for the most part, the proposed development does not cause adverse solar reflectivity glare on to the adjacent roads, albeit that a range of reflectivity ratings were observed below and above the 20% threshold. Mitigation through defining materials which assist in defusing reflectivity were adopted by the Architect and the team during the design development phase and it was concluded that the proposed Mod 13 works will have limited environmental impacts on the surrounding roadways, and will comply with SEARs and Sydney DCP 2012 reflectivity requirements.

◆ **Tree Removal and Replanting**

Seventy-two trees are located in the vicinity of the Approved Project. The Proposal will remove 24 of these trees and replace them with 13 Sydney Red Gums, 5 Little Gem Magnolias, and 6 Cabbage Tree Palms. While 16 of the trees to be removed are of a high retention value, this is not because of any special heritage or ecological significance, but simply because they are mature specimens that contribute to the amenity of the site and streetscape adjoining the site. Any loss of amenity will be temporary, as the existing trees to be removed will be replaced by species that will be larger at maturity than the existing trees.

All remaining trees surrounding The Star will be retained and protected during the construction of the Proposal.

◆ **Traffic, Parking, Transport and Access**

The proposed strategy to mitigate traffic impacts relating to the Proposal includes the provision of a new car park entry on Pyrmont Street to spread the demand more evenly across the road network and reduce the pressure on Pirrama Road. The Proposal will have a limited impact on operational traffic flow within the local area based upon traffic generation and distribution.

There is adequate car parking capacity within the basement car park to accommodate the cumulative increase in demand arising from the Approved Project and the non-tower components of Mod 13. A car stacker with access from the internal service road has been proposed to accommodate the parking demands arising from residents, visitors and hotel guests of the Ritz-Carlton hotel and residential tower. This response is considered adequate to mitigate any adverse impacts on surrounding on-street parking for increased parking demand arising from the Proposal.

The management measures within the Loading Dock Management Plan will adequately mitigate any environmental impacts arising from the activities of the loading docks during the operational phase of the Proposal.

The Proposal will improve the pedestrian and bicycle access to and from the site, and improve the site's connection to the CBD along the Pyrmont Bridge and Darling Drive cycleways, which are identified as part of the strategic cycleway network in the Sydney City Centre Access Strategy.

The proposed Level B2 Interchange improvement works will support sustainable transport by making access to and from the Light Rail station legible and easy to access. These works will be complemented by the improvement in bicycle parking options on the site, which will also enhance the mode share of sustainable transport options to and from the site. The site is well-connected to several modes of public transport. By improving the interface of the site with various transport options, the Proposal will encourage a mode shift to public and active transport usage.

The Construction Management Plan and Traffic Impact Statement also provide a comprehensive range of mitigation and management measures that will limit the environmental impacts associated with the construction phase of the

development to acceptable levels.

In summary, it is anticipated that the Proposal will have a limited impact on the traffic generation, road network performance, access and parking. The Proposal will also provide positive impacts on pedestrian and bicycle access, as well as public and active transport usage.

◆ **Acoustics**

The Noise Impact Assessment has assessed the noise impacts that will be generated by the Proposal generally, and in comparison, to the Approved Project in relation to mechanical plant and equipment, operational noise, entertainment noise from licensed premises, road traffic noise, and construction noise including construction traffic noise,

The potential mechanical plant and operational noise of the Proposal can comply with the existing conditions of MP08_0098 relevant to the off-site residential and commercial receivers.

The cumulative noise emissions from the entertainment areas of the Proposal and the Approved Project can meet the entertainment noise condition criteria for the off-site residential and commercial receivers. During the detailed design process, noise emissions will continue to be reviewed to confirm that compliance can be achieved.

The potential for road traffic noise impacts to occur on the surrounding roads as a result of additional traffic generated by the Proposal was assessed in line with the NSW Road Noise Policy (RNP). The assessment considered the forecast traffic growth and traffic generation from The Star, provided by Mott Macdonald, and the impact of previous modifications to MP08_0098 on traffic growth. The assessment predicted that the traffic generated by the Proposal can comply with the provisions of the RNP.

The potential for external ambient noise to impact noise sensitive uses within the proposed development including hotel rooms and residential accommodation were also assessed. Several glazing and façade specifications have been incorporated into the design of the Tower to deliver appropriate acoustic amenity to the hotel and residential occupants while delivering ventilation and a high quality internal residential amenity.

A noise and vibration assessment of typical construction equipment was assessed in line with the Interim Construction Noise Guideline and Australian Standard AS 2436-2010. The assessment identified noise management levels and mitigation strategies for managing noise and vibration where these levels are exceeded during the construction phase. These recommendations are designed to protect the amenity of occupants within and external to the site.

Measurements of the light rail vibration indicate that structure-borne noise and vibration will not impact the residential and hotel areas of the Proposal.

Various noise mitigation measures are proposed so that the Proposal will when completed will comply with the relevant criteria and terms of approval and be within established criteria.

The Noise Impact Assessment has reviewed the change in noise level between the Approved Project and the Proposal in accordance with the criteria set out in the relevant policies, guidelines and conditions of consent. On the basis of this review, it is concluded that the Proposal will have limited environmental impacts beyond the Approved Project in terms of noise and vibration impacts.

The Noise Impact Assessment has reviewed the change in noise level between the Approved Project and the Proposal in accordance with the criteria set out in the relevant policies, guidelines and conditions of consent. On the basis of this review, it is concluded that the Proposal will have limited environmental impacts beyond the Approved Project in terms of noise and vibration impacts.

◆ **Air Quality and Odours**

Air quality impacts relating to construction activities and operation of the Proposal have been assessed in the Air Quality Report by WSP provided at **Appendix EE**.

The assessment concludes there will be no operational air quality or odour impacts from the Proposal on the surrounding sensitive receptors.

The construction works associated with the Proposal have the potential to be a source of dust and gaseous emissions. However, the impacts of dust and gaseous emissions are likely to be of a small scale due to the locality and scale of works.

The report provides mitigation measures to manage sources of air contaminants during construction through a hierarchy of emission control measures including prevention, suppression and containment. The management measures will be incorporated into the detailed Construction Management Plan to be prepared prior to issue of the relevant Construction Certificate. It is considered that dust issues associated with demolition and construction activities can be adequately managed through implementation of these management measures.

Given the above, it is concluded that the Proposal will have no impact during operation and a limited environmental impact on air quality and odours during construction works.

The following aspects of the project will result in a positive environmental impact and will be positive benefits:

◆ **Residential Amenity**

FJMT has designed the residential component of the tower to comply with the objectives of the ADG and SEPP 65; balancing the needs of future occupants, whilst limiting potential external environmental impacts. The Proposal will deliver high quality and positive residential amenity for the future residents of the development by achieving the communal open space, visual privacy, private open space, natural ventilation, daylight access, apartment mix, storage and floor to ceiling heights requirements outlined in the ADG; whilst not impacting the residential amenity of Astral Residences and adjacent residential properties. The proposed apartments will have access to sunlight, be well ventilated, have access to high quality communal open space and private open space as well as having expansive panoramic views of Sydney Harbour, Pyrmont and the City skyline.

◆ **Social Impact**

Urbis has assessed the baseline conditions, reviewed the Proposal, and profiled the potential impacts. The Proposal will generally have a positive social impact for Pyrmont especially through provision of the Neighbourhood Centre, generating employment, activating public spaces and enhancing the public domain. SEGL will also contribute significant funding towards affordable housing. Any potential impact with respect to traffic and construction-related loss of amenity will be mitigated to acceptable levels in accordance with relevant management plans.

◆ **Economic Impact**

Investment in and benefits from the Proposal will flow through to Sydney and the NSW economy. PWC has determined the economic benefit of the Proposal to be substantial; it is estimated that the Proposal will create an additional 747 jobs each year between FY 2017 and FY 2030 beyond those 7,000 jobs (direct and indirect) SEGL already provides. The Proposal will financially contribute \$800 million to the NSW economy, especially to complementary services, and increase household consumption in the NSW economy \$329 million from FY 2017 and FY 2030. The Ritz Carlton Hotel and Residential Tower, is a unique investment opportunity into the NSW market and will positively enhance the health of NSW's economy and ensure SEGL and Sydney stay competitive among the global cities.

◆ **Public Domain**

Public domain and access improvements will significantly improve The Star's interface with the public domain. The proposed public domain enhancement works will improve the interface of the site with the surrounding streets and create a more pedestrian friendly environment, improving pedestrian safety and amenity. The public domain works and ground level retail spaces will enable passive surveillance, and activate previously blank walls at the boundaries of the site, resulting in a positive environmental impact. These proposed works will create an activated, connected and permeable ground plane, which invites users to interact with The Star and the Pyrmont precinct.

Other works that will improve and activate the streetscape include the Neighbourhood Centre, the Ritz-Carlton hotel lobby, the residential lobby, and F&B premises along Jones Bay and Pirrama Road. These areas have been designed to improve sightlines and passive surveillance, while providing weather protection and good amenity.

The Neighbourhood Centre will increase street activation at the corner of Pirrama Road and Jones Bay Road. Further, the Pirrama Road frontage of The Star will be opened up at street level to increase transparency and activation, thus encouraging greater use of the light rail.

The proposed works under Mod 13 will have a positive impact on the public domain and streetscape surrounding the site through the public domain improvements.

◆ **Safety and Security**

The CPTED Assessment has considered the existing security and surveillance measures on the site, relevant policies and guidelines, local crime statistics, as well as the architectural plans for the Proposal. The planned works for the Level B2 Transport exchange, improved pedestrian connections along Pirrama Road, together with ground floor activation were found to improve pedestrian safety through passive surveillance. Likewise, upgrades to wayfinding and increasing permeability around the site's edges were found to increase site legibility. With the specified mitigation methods implemented, the CPTED Assessment concluded that the Proposal will deliver of a safe and secure environment.

◆ **Stormwater and Flooding**

The stormwater catchment for the site will not change as a result of the Proposal. There will be no increase to stormwater flows for the site, and the existing site stormwater infrastructure has adequate capacity to drain the Proposal. The proposed stormwater infrastructure upgrade works will enhance the existing stormwater functioning and quality on site by reinstating the existing northern stormwater harvesting tank and installing new rainwater pump and filtration requirement at Level B4.

The existing Council flood model confirms that overland flows occur around the site and are generally contained within the road network. TWW conclude that overland flows have the potential to overtop the kerb and flood the site at certain low-points on Pyrmont Street, Edward Street and Pirrama Road. In particular, the trapped low point on Pyrmont Street is a critical location as water ponding here would not be able to escape, and has the potential to flood the site. The Proposal seeks to mitigate the flood risk to the site by upgrading existing stormwater pits inlets and pipes. The Proposal will positively improve the flood risk to the site and adjacent properties by reducing the 100-year ARI flood depth from 420mm to 230mm, beyond that already assessed under the Approved Project.

◆ **Sustainability and Resilience**

The Proposal will be achieving sustainability best practice outcomes and has been registered with the Green Building Council. The Proposal builds upon SELG's existing initiatives under the Approved Project. The existing and proposed ESD targets and initiatives demonstrate SEGL's commitment to sustainability. The Proposal has been benchmarked against industry-recognised sustainability tools to demonstrate the best practice holistic sustainability outcomes can be achieved. In particular, a 165kWp photovoltaic system will be installed to provide zero-carbon electricity to the project. A Climate Adaption Plan outlined in the Sustainability Report will help manage climate change-related risks.

On the basis of the above summaries, it is clear that the Proposal has a limited environmental impact beyond that already assessed for the Approved Project.

Balancing the Proposal's environmental impacts which can be mitigated to acceptable levels against the many environmental benefits that it will deliver, it is considered that overall, the proposed development's environmental impacts beyond those already assessed will be limited.

11.2 SEAR 2 - BUILT FORM AND DESIGN EXCELLENCE

The ribbon and Ritz Carlton Hotel and Residential Tower design is a result of an alternative design excellence process, as detailed in the Design Excellence Report located at **Appendix F**. The Design Excellence Strategy was endorsed by Marcus Ray the Deputy Secretary of the DP&E on 20 October 2016. The design excellence process comprised of three alternative design options prepared by BVN Architecture, FJMT and Grimshaw Architects. FJMT were selected as the preferred scheme by a Design Review Panel. FJMT have been retained during the design development phase.

The design is of high quality with specific consideration to the overall site functioning, orientation, vistas and connectivity, street activation, open space, massing, setbacks and building articulation. An Architectural Design Statement is provided at **Appendix C**, and outlines the design intent for Mod 13. The Proposal sets out to create a landmark architecture that is unique and true to the character of Pyrmont. The ribbon and tower are integrated into the existing built form; the ribbon extends the existing Level 05 form and the tower further activates Pirrama and Jones Bay Road. The Proposal maximises 360-degree views of the Sydney Harbour, making the Proposal incredibly special.

An Urban Context Report has been prepared and is included at **Appendix G**, the report has undertaken a thorough analysis of the site and its current and future context. The Urban Context Report notes that while the Proposal is not of a similar scale with its immediate surrounds, it is considered in scale with its context when considering its location within an area of significant change within Sydney. The tower form has been designed in consideration of the winter sun into public spaces and park, curved to reduce wind effects and to share views. The proposed tower form has been carefully considered to minimise impact to public spaces. The location of the tower at the northern end of the site was considered the most suited, as it limits interruptions to the operation of the light rail service and internal service road, minimise noise and vibration impact to the Astral Hotel and Astral Residences and enables the continued functioning of the MUEF and Lyric Theatre. The rationale behind the location, is considered sound and accepted.

A Visual Impact Assessment has been prepared and is included at **Appendix H** to identify the visual changes and view impacts of the development. The VIA has shown that although the Proposal is prominent in views from a wide range of areas, it is appropriate to the strategic context within the area. Based on the above, the Proposal has been considered to provide an appropriate response to its visual context and it is therefore considered that the overall visual impact of the Proposal on public and private views, including cumulative impacts, is acceptable and limited.

A floor-by-floor breakdown of GFA has been prepared by DWP and included at **Appendix RR**. The GFA Schedule identifies different land uses by level and demonstrates the existing and proposed GFA as a result of Mod 13. The Proposal will result in a 34.84% increase in GFA.

11.3 SEAR 3 - AMENITY

An Architectural Design Statement including a SEPP 65 assessment has been prepared and is included at **Appendix C**. The statement assesses sunlight/overshadowing, natural ventilation, wind impacts, reflectively, visual and acoustic privacy and safety and security as well as key design criteria outlined in SEPP 65. FJMT have confirmed that the design quality principles set out in Part 2 of SEPP 65 may be achieved from the residential component of the tower.

- ◆ To minimise overshadowing the top of the tower has been sculpted to follow the sun access plane, as a result Pyrmont Bay Park will receive no additional overshadowing between 12:00pm and 2:00pm at 21 June. The apartments are located to optimise solar access and minimise overshadowing within the site and to significant public domain elements.
- ◆ The Proposal provides cross ventilation to 70% of all apartments, the overall floor plate geometry assists in uniforming wind pressures around the tower and promoting cross ventilation by creating a high percentage of dual-oriented apartments.
- ◆ A Pedestrian Wind Environmental Assessment has been prepared and is included at **Appendix FF**. FJMT has worked in conjunction with the wind engineers CPP to incorporate the wind recommendations into the development design. For this reason, no adverse wind impacts are anticipated for the Proposal.
- ◆ A Solar Reflectivity Assessment has been prepared and included in **Appendix GG**. The external glazing over the western podium façade will have a reflectivity coefficient less than 15% and the remaining tower facades will have a reflectivity coefficient less than 10%. FJMT has worked in conjunction with CPP to minimise the potential for any adverse reflectivity or glare impacts on the adjacent road network.
- ◆ The proposed apartments are located within the tower at the northern end of the site. Separation between the apartments and the greater site is achieved via positioning of the communal open space. Noise sources such as lift shafts and common corridors have also been minimised by adoption of a side core arrangement. The existing operation of the site will not impact the acoustic privacy of the proposed apartments.
- ◆ The Architectural Design Statement confirms that the Proposal has sufficient building separation, the distance west

to the Watermark is 30.2m and the distance southwest to Astral Hotel is 47m. The tapering at the base of the tower from increases building separation from Astral Hotel, and to all surrounding buildings.

- ◆ A CPTED Report has been prepared and included in **Appendix N**, to assess the elements of crime, the fear of crime, that may be associated with the proposed modification. It is overall considered that Mod 13 will enhance the provision of a safe and secure environment by increasing natural and casual surveillance opportunities, enhancing line of sight along Pirrama Road and Jones Bay Road, provide strong ownership cues and provide suitable lighting.
- ◆ The Noise Impact Assessment by WSP (**Appendix K**) has assessed the noise ingress to the proposed residential apartments and hotel rooms taking into account The Star's noise sources as well as noise from external sources. WSP concludes that the internal amenity criteria as set out by the Sydney DCP 2012 can be met internally through use of appropriately selected glazing and attenuated natural ventilation paths. WSP has provided preliminary specifications for glazing to control the worst-case façade noise level in their Noise Impact Assessment report. The attenuated natural ventilation paths are proposed to be achieved through a combination of ducted façade louvres and trickle vents in the spandrel which will include appropriate acoustic treatment as detailed in the Mechanical Services report at **Appendix KK**. The apartments on the lower levels of the tower have been designed to permit a high degree of occupant environmental flexibility and amenity through the provision of Juliet and wintergarden balconies with 100% sealable and acoustic façades. WSP also recommends the preparation of an Operational Noise Management Plan (ONMP) and notes that the noise management measures introduced to ensure compliance for external receivers will also benefit the onsite residential and hotel receivers.
- ◆ An air quality assessment (**Appendix EE**) has been undertaken which considered air quality impacts from the surrounding environment and operation of the site. The air quality report notes that air emissions from the commercial exhaust ventilation system and the basement carpark exhaust will be designed in accordance the relevant Australian Standard.

Emergency diesel generators stacks are located at a distance greater than 50 metres from the residential tower. Management practices have been recommended with regard to air quality. Accordingly, emissions from this source are therefore considered to be a low risk.

11.4 SEAR 4 - VISUAL IMPACT

A Visual Impact Assessment (VIA) has been prepared and is included at **Appendix H** to identify the visual changes and view impacts of the development. The VIA is accompanied by a view analysis as per the Land and Environment Court requirements. The assessment reveals that the modification will result in public domain and private view changes.

To respond to the question of 'limited environmental impacts' in accordance with SEAR 1, Architectus has reviewed the previous Visual Impact Assessments that were prepared for both the original Major Project MP08_0098 and the subsequent Mod 7 application to expand the Ballroom and create pre-function areas. The VIA also summarises several other modifications to MP08_0098 which have had visual impacts that have not been previously assessed, including Mod 4, Mod 8, Mod 10, and Mod 14.

The VIA notes that the current context of the site has changed significantly from that assessed for the Major Project (MP 08_0098 was originally submitted in 2008) and subsequent modifications. The changing context has included the development of Barangaroo South and the Sydney International Convention, Exhibition and Entertainment Precinct.

This makes direct comparison of views and assessments between the Proposal and previous modifications to MP08_0098 impossible. If assessed in today's context of tall buildings, the previous modifications to MP08_0098 may be considered to have a lesser visual impact than within the context they were approved.

However, to understanding the impact of the Proposal compared to the Approved Project, a comparison of the assessed impacts against the impacts of the Proposal has been undertaken by Architectus as summarised below.

The current Proposal has been assessed as having a moderate-high impact across the majority of the eastern edge of Darling Harbour and a moderate impact across the majority of Darling Harbour. This can be compared against the assessed impact of previous modifications, which have been assessed as having a moderate impact on public domain views from most of eastern Darling Harbour and also Pyrmont Bay. Based on this, the additional environmental impact of the Proposal in comparison to the Approved Project is considered to be limited.

The VIA concludes that, despite the Proposal being significantly taller than the Approved Project, its overall impact on public domain views is limited particularly as:

- ◆ The Proposal does not obstruct the elements considered most important under the planning controls including water, the land-water interface, public places, heritage items or landmarks.
- ◆ The Proposal is consistent with the anticipated future context of the locality, with taller buildings emerging around Darling Harbour today and future development of the Bays Precinct anticipated in strategic planning frameworks. This includes the recent development of Barangaroo, the Sydney International Convention, Exhibition and Entertainment Precinct, The Ribbon, redevelopment of the Four Points Hotel and Central Park. The impact of the Proposal on public domain views is considered to be limited given the context of taller buildings, both recent and future.

The VIA considers the overall visual impact of the Proposal acceptable. Some views impacted by the current Proposal are the same or related to those impacts through previous modifications. Mod 13 needs to be assessed within the current built form and statutory context, which has changed considerably from when the Major Project and subsequent modifications were approved. These changes include the development of Barangaroo, the ICC and other developments around Darling Harbour and strategic documentation of the westward expansion of the city to include the Bay Precinct.

The VIA has shown that although the Proposal is prominent in views from a wide range of areas, it is appropriate to the strategic context within the area. The Proposal will be below the height of the taller approved Barangaroo towers and is therefore in scale with the nearby major harbour, although not its immediate context.

The Urban Context Report (**Appendix G**) and Contextual Analysis (**Appendix XX**) provides analysis of the Proposal having regard to current and future urban context of the site concluding that the Proposal will make a positive contribution to its locality.

11.5 SEAR 5 - TRAFFIC, CAR PARKING, TRANSPORT AND ACCESS

A Traffic Impact Statement has been prepared by Mott MacDonald and is included at **Appendix J**. The expected traffic generation of Mod 13 has been identified against the existing operations and the proposed operations as approved by under the Major Project approval and all subsequent modification. Mod 13 will have little difference on operational traffic flow within the local area based upon traffic generation and distribution, the LOS of key intersection will remain at a C or above. The site is well-connected to several modes of public transport by improving the interface of the site with various public transport option the Proposal will encourage a mode shift to public transport usage.

As per the TIS conclusions, there is adequate car parking capacity within the basement car park to accommodate the cumulative increase in demand arising from Mod 14 and the non-tower components of Mod 13. In addition, there are 2,892 off-street and 1,200 on-street parking spaces within walking distance of the site that have capacity during business hours. The recent opening of the ICC Sydney with its two 24-hour parking stations has provided an additional 826 off-street parking spaces within walking distance of The Star.

A car stacker with access from the internal service road has been proposed to accommodate the parking demands arising from residents, visitors and hotel guests of the Ritz-Carlton hotel and residential tower.

This response is considered adequate to mitigate any adverse impacts on surrounding on-street parking for increased parking demand arising from the Proposal.

The site is well serviced by a number of public and active transport options, enabling visitors, patrons, staff, and residents to use these services to travel to and from the site. In addition, bicycle parking facilities are also proposed, which will contribute to a decreased reliance on car ownership for users of the site, further reducing parking demand on the site in relation to the proposed development.

Accordingly, parking demand is not anticipated to result in any adverse environmental impacts in relation to the Proposal, as well as the site and surrounding areas.

Operational traffic impacts relating to the Proposal have been considered and adequately addressed by Mott MacDonald in the TIA.

The proposed strategy to mitigate traffic impacts relating to the Proposal includes the provision of a new car park entry on Pyrmont Street to spread the demand more evenly across the road network and reduce the pressure on Pirrama Road. Additionally, the Proposal to relocate taxis into the service road will address the late-night operational issues caused by taxi queueing in Pirrama Road.

The TIS concludes that through the mitigation measures set out above, the local road network will continue to operate at existing or otherwise acceptable performance levels despite the additional traffic generated by Mod 13.

Therefore, it is concluded that the Proposal will not have an adverse environmental impact on operational traffic flow within the local area.

The proposed upgrades to the Star Events Loading Dock, the extension of its operating hours, as well as the loading dock upgrades that have been proposed as part of Mod 14 will ensure that the increased demand for loading dock space as a result of the Proposal will be adequately accommodated. In addition, it is anticipated that the management measures within the Loading Dock Management Plan will adequately mitigate any environmental impacts during the operational phase of the Proposal.

The proposed works will improve the pedestrian and bicycle access to and from the site, and improve the site's connection to the CBD along the Pyrmont Bridge and Darling Drive cycleways that are identified as part of the strategic cycleway network in the Sydney City Centre Access Strategy.

The proposed Level B2 Interchange improvement works will support sustainable transport by making access to and from the Light Rail station legible and easy to access. These works will be complemented by the improvement in bicycle parking options on the site, which will also enhance the mode share of sustainable transport options to and from the site.

11.6 SEAR 6 - PUBLIC DOMAIN AND PUBLIC ACCESS

A Landscape Design Report has been prepared and is included at **Appendix E**, which outlines public domain and access improvements proposed under Mod 13.

Public domain and access improvements will significantly improve The Star's interface with the public domain. The proposed public domain enhancement works will improve the interface of the site with the surrounding streets and create a more pedestrian friendly environment, improving safety and amenity. The public domain works and ground level retail spaces will improve passive surveillance, and activate previously blank walls at the boundaries of the site, resulting in a positive environmental impact. These proposed works will create an activated, connected and permeable ground floor plane, which invites users to interact with The Star and the Pyrmont precinct. The proposed public domain and access improvements will have a significant positive impact on Pyrmont; building upon the works approved under Mod 14.

Overall it is considered that the proposed redevelopment of The Star will enhance the provision of a safe and secure environment. It is considered that the Proposal will provide strong ownership cues, particularly for the local community, and increase vibrancy and territorial reinforcement.

11.7 SEAR 7 - ECOLOGICAL SUSTAINABLE DEVELOPMENT

A Sustainability Report has been prepared and is included in **Appendix Z**. The report outlines how the modification will incorporate best practice ESD principles and contains ESD targets (existing and proposed) that will be achieved under Mod 13. The existing and proposed ESD targets and initiatives demonstrate SEGL's commitment to sustainability during design, construction and ongoing operation. All aspects of the Proposal will be subject to compliance with SEGL's Sustainable Design Guidelines. The Ritz-Carlton and Residential Tower is targeting a 5 Star Green Star rating through the GBCA's Green Design and As Built rating tool, which provides a third party verified sustainability outcome. Further, the development can achieve Australian Excellence suitability outcomes and achieve BASIX NatHERS compliance for the residential component. The proposed ESD commitments build upon SEGL's existing initiatives proposed under the Major Project approval and all subsequent modifications, and will have a significant positive impact on the energy efficiency capabilities of The Star.

11.8 SEAR 8 - HERITAGE AND ABORIGINAL HERITAGE

A Heritage Impact Statement has been prepared, refer to **Appendix P**. The Heritage Impact Statement assesses the potential heritage impact of Mod 13 in relation to the heritage provisions of the SLEP 2012 and SDCP 2012, and considers the impacts on the SELS Buildings. Regard was had to the sites context and proximity to heritage items as viewed from these items. Limited heritage impacts have been identified on the SELS Buildings and the proximate heritage listed items to The Star. The proposed works are supported from a heritage perspective, as the Proposal does not affect the visual integrity or interpretation of these heritage items. The design serves to retain existing views and vistas to and from the identified heritage item by maintain generally the same setback at the existing fabric to the north-east corner. The reduced floorplate and tower form also ensures the retention of views around the heritage items. The Proposal will not have an impact on the SELS Building above that already assessed under the Major Project approval and all subsequent modifications.

An Aboriginal and Historical Archaeological Assessment has been undertaken, refer to **Appendix O**. This report assesses the archaeological potential of the site based on a review of the past archaeological studies and of past disturbances of the site. Based on previous studies, the site is likely to have very low to nil Aboriginal cultural heritage and historical archaeology due to the environmental context of the site and previous disturbance. It is assessed that the current Proposal is highly unlikely to result in any archaeological impacts beyond those all assessed in 1994 as part of a comprehensive archaeological investigation. The Proposal is considered acceptable in terms of Aboriginal and Historical Archaeology. The Proposal will not have an impact on aboriginal and historical archaeological above that already assessed under the Major Project approval and all subsequent modifications.

11.9 SEAR 9 - CONTAMINATION

Contamination has been addressed in detail under Environmental Assessment in **Section 9** of the EAR. For the purpose of the considerations under SEPP 55, that section states that the site has been fully remediated and there is a low likelihood of significant contamination.

Further, the area of significant site disturbance as part of Mod 13 is limited to the tower location in the northern portion of the site which has been confirmed to contain no adverse levels of contamination.

11.10 SEAR 10 - INFRASTRUCTURE

An Electrical Infrastructure Assessment and Hydraulic Infrastructure Report have been prepared by Umow Lai, refer to **Appendix AA** and **Appendix BB** respectively. Both reports detail the current infrastructure and demonstrate that the Mod 13 Proposal works can be suitably serviced, without adding undue pressure on the current infrastructure systems.

To support the cumulative demand placed on the AUSGRID high voltage networks as a result of Mod 13 and Mod 13, it is proposed to install parallel tri-generation on the low voltage network in the form of on-site gas power electrical generation to run in parallel with the AUGRID network. The upgraded gas and diesel powered on-site generation will be an alternative power supply and not create added pressure on the existing AUSGRID network.

LandPartners (who are an accredited Water Servicing Coordinator) have assessed the suitability of Sydney Water's water and sewer system to supply the proposed development. Sydney Water have indicated that there is adequate capacity in the local water supply network.

The proposed works to the Level B2 transport interchange will improve pedestrian and bicycle access to the light rail platform and adequately accommodate the increased pedestrian and bicycle movements associated with Mod 13. Mod 13 will not impact the functioning of the light rail; Mott MacDonald has consulted with Transdev, the operator of the light rail.

11.11 SEAR 11 - AIR, NOISE AND ODOUR

An assessment of the potential air and odour impacts has illustrated that the Proposal will not have an adverse impact on air quality and odours. With regard to air quality impacts from the surrounding environment and operation of the site upon the residential tower were considered 'low risk'. It is considered that dust issues associated with demolition and

construction activities can be adequately managed through implementation of management measures to be incorporated into the detailed Construction Management Plan to be prepared prior to issue of the relevant Construction Certificate.

A Noise Impact Assessment has been undertaken by WSP to assess noise egress, traffic noise, light rail noise and vibration, internal; acoustic requirements and construction and noise vibration in relation to Mod 13. The potential for external ambient noise to impact noise sensitive uses of the proposed development including hotel bedrooms and residential accommodation was also assessed. The report concludes that the Proposal will have a limited environmental impact beyond that which has been approved as part of MP08_0098, up to and including Mod 14 in relation to mechanical plant, operational noise, entertainment noise, vibrational noise, construction noise and vibration, and road traffic noise. To ensure limited environmental impacts, the report has also provided several mitigation measures including glazing recommendations, design specifications, and the requirement for an updated Operational Noise Management Plan to incorporate measures outlined in WSP's Noise Impact Assessment.

11.12 SEAR 12 - DRAINAGE AND STORMWATER

A Hydraulic Infrastructure Report has been prepared and included at **Appendix BB**. The report concludes that there will be no increase in stormwater flows for the site and the existing site stormwater infrastructure has adequate capacity to drain the proposed new built areas. New building area catchment will be directed to either the northern or southern collection systems, and utilise the existing stormwater quality treatment devices. The capacity of these quality treatment systems is adequate for the proposed development. The Proposal will not have an impact on drainage above that already assessed under the Major Project approval and all subsequent modifications.

A Water Management Report has been prepared, which provides a water management strategy for the site. This report is included at **Appendix CC**. The report assesses the existing hydraulic services on the site and makes recommendations on the use, conservation, reuse and disposal of potable/non-potable water. The recycled water system will be extended to the proposed Mod 13 development areas for WC flushing, further rainwater collection will be directed to interface with the existing site recycled flushing water distribution system. The new building works will be fitted with water efficient fixtures and fittings. The proposed Water Management Strategy will ensure that the proposed development will result in limited environmental impacts in relation to drainage and stormwater.

The report also provides recommendations on water sensitive urban design (WSUD).

These recommendations include:

- ◆ Water efficient fixtures and fitting selection;
- ◆ Water meters with BMS connection will be installed at all major water use area for hot and cold and recycle water services;
- ◆ The recycled water system will be extended to the proposed Mod 13 development areas for public amenity WC flushing;
- ◆ The existing site stormwater infrastructure has adequate capacity to drain the proposed new build areas. The catchment for the site will not change as a result of the development; therefore, there will not be increased stormwater flows from the site;
- ◆ The existing disused northern stormwater harvesting tank is to be reinstated and new drainage from Mod 13 areas to be diverted where practical to this tank;
- ◆ Rainwater collected shall be directed to interface with the existing site recycled flushing water distribution system;
- ◆ Install new rainwater pumps and filtration equipment at Level B4 and interface with the existing site recycled flushing water distribution system; and
- ◆ New area catchment will be directed to either the northern or southern collection systems, and utilise the existing stormwater quality treatment devices.

The proposed Water Management Strategy will facilitate positive environmental outcomes for the site.

11.13 SEAR 13 - STAGING

A Construction Management Plan has been provided by Multiplex and is included at **Appendix HH**. The Plan provides information on the indicative phasing of construction to enable a thorough assessment of construction traffic and noise impacts. The Acoustic Report and the Traffic Impact Statement have assessed the construction impacts on the basis of the detailed staging information in the Construction Management Plan to ensure the Proposal will not have an adverse environmental impact.

11.14 SEAR 14 - PRESCRIBED AIRSPACE FOR SYDNEY AIRPORT

An Airspace Application and Assessment was undertaken by Thompson GCS and is included at **Appendix S**. The assessment identified the Proposals impact on the prescribed airspace from Sydney Airport, including impacts of cranes required for construction. The maximum height proposed for The Star as part of Mod 13 will not result in any change to the existing Instrument Flight Procedures. The proposed development is outside the final approach fan for aircraft flying the instrument approach procedure to Sydney runway 16L. It is also 78.0m below the applicable departure surface established over the Sydney area. At a maximum height of 285m AHD the construction cranes will penetrate the Obstacle Limitation Surface by 129 m and the Radar Terrain Clearance Chart surface by 41m, however, the cranes are below the PANS-OPS protection surface. This crane exceedance will be periodic and is considered acceptable.

On 22nd December 2017 CASA provided advice to the Department of Infrastructure and Regional Development (DIRD) about the building and crane height requests. They advised that the proposed building height of 237.0m AHD would have no impact on aircraft operations. To enable crane operations to a maximum height of 285m AHD, CASA recommended that the 335m AHD RTCC contour be extended in a westerly direction to encompass the position of the cranes associated with the development at 20-80 Pyrmont Street. CASA required that the building and cranes to be lit.

As part of the required consultation process all relevant agencies have provided their responses. SACL then forwarded the application to the Department of Infrastructure and Regional Development (DIRD) for final approval.

On the 22nd of March 2018, the Director of Airspace Protection Aviation and Airports Division, as the Secretary's Delegate for the purposes of the Regulations, issued approval for the controlled activity for the intrusion of the building in the prescribed airspace for Sydney Airport to a maximum height of 237m AHD.

In making the decision, the Delegate took into consideration the opinions of CASA, Airservices Australia and SACL.

Accordingly, Mod 13 will not present a safety risk or impact to other aircraft operations in the proximity of this area, as confirmed by Airservices at Sydney Airport and Civil Aviation Safety Authority, and as demonstrated through the approval of the controlled activity to penetrate prescribed airspace by DIRD.

11.15 SEAR 15 – DEVELOPER CONTRIBUTIONS

Developer contributions and affordable housing contributions have been addressed in this EAR and in the proposed modifications to conditions of consent for MP08_0098.

12 MODIFICATIONS TO CONDITIONS OF MP08_0098

Table 30 below sets out the proposed modifications to the conditions of approval for MP08_0098 (up to and including Mod 14). Inserting text is highlighted in **red** and text that is proposed to be deleted is shown **struck through**.

Table 30 – Proposed modifications to the Conditions of Approval for MP08_0098

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
Part A – Administrative Conditions	
<p>A1 Development Description</p> <p>Development approval is granted only to the carrying out the development described in detail below:</p> <ul style="list-style-type: none"> Construction of a 10-storey hotel above a 3-storey podium containing ancillary retail, gaming and conference facilities on the currently vacant Switching Stationsite; Additional basement car parking to a maximum of 3000 car parking spaces across the whole site, to be accessed via the existing Casino complex carpark; Re-development of the retail arcade through the ground floor level of the complex, linking Pymont Bay park to the intersection of Union and Pymont Streets, and to Jones Bay Road; The redevelopment of the eastern (Pirrama Road) frontage of the Casino building currently occupied by large external stairs, to contain additional restaurants, retail outlets, gaming space, other entertainment and tourist related facilities, a new entry and a driveway providing a new vehicular drop-off to the Casino; Works to the exterior of the existing Casino tower buildings; and Alterations and additions, including gaming area expansion, enclosure of the Level 3 terrace to facilitate a new restaurant, indoor and outdoor gaming areas, alterations to the porte-cochere, and mechanical upgrades through-out the site 	<p><i>Condition A1 is amended as follows:</i></p> <p>A1 Development Description</p> <p>Development approval is granted only to the carrying out the development described in detail below:</p> <ul style="list-style-type: none"> Construction of a 10-storey hotel above a 3-storey podium containing ancillary retail, gaming and conference facilities on the currently vacant Switching Stationsite; Additional basement car parking to a maximum of 3000 car parking spaces across the whole site, to be accessed via the existing Casino complex carpark (excluding the Car Stacker System, which will be accessed from the internal through road); Re-development of the retail arcade through the ground floor level of the complex, linking Pymont Bay park to the intersection of Union and Pymont Streets, and to Jones Bay Road; The redevelopment of the eastern (Pirrama Road) frontage of the Casino building currently occupied by large external stairs, to contain additional restaurants, retail outlets, gaming space, other entertainment and tourist related facilities, a new entry and a driveway providing a new vehicular drop-off to the Casino; Works to the exterior of the existing Casino tower buildings; and Alterations and additions, including gaming area expansion, enclosure of the Level 3 terrace to facilitate a new restaurant, indoor and outdoor gaming areas, alterations to the porte cochere, and mechanical upgrades through-out the site. Demolition of part of the existing building in the northern portion of the site, including part of the Pirrama Road and Jones Bay façade to enable the construction of the Ritz-Carlton Hotel and Residential Tower including a neighbourhood centre, a car parking stacker system, terrace and recreational facilities, internal circulations upgrades, façade integration works, infrastructure upgrades, site wide landscaping and public domain works, Food & Beverage tenancies, and signage. <p>Reason: to accurately to describe the Proposal.</p>

MP08_0098 Conditions of Approval (including Mod 14)

A2 Development in Accordance with Plans

The Approved Project is to be consistent with the following drawings:

Drawing No.	Revision	Name of plan	Date
A90B5	C	Existing Site Plan & GFA Diagram - Level B05	11.11.16
A90B4	C	Existing Site Plan & GFA Diagram - Level B04	11.11.16
A90B3	D	Existing Site Plan & GFA Diagram - Level B03	11.04.17
A90B2	F	Existing Site Plan & GFA Diagram - Level B02	11.04.17
A90B1	E	Existing Site Plan & GFA Diagram - Level B01	11.04.17
A9000	E	Existing Site Plan & GFA Diagram - Level 00	11.04.17
A9001	E	Existing Site Plan & GFA Diagram - Level 01	11.04.17
A9002	E	Existing Site Plan & GFA Diagram - Level 02	11.04.17
A9003	E	Existing Site Plan & GFA Diagram - Level 03	11.04.17
A9004	C	Existing Site Plan & GFA Diagram - Level 04	11.11.16
A9005	E	Existing Site Plan & GFA Diagram - Level 05	16.02.17
A9006	C	Existing Site Plan & GFA Diagram - Level 06	11.11.16
A9007	C	Existing Site Plan & GFA Diagram - Level 07	11.11.16
A9008	C	Existing Site Plan & GFA Diagram - Level 08	11.11.16
A9009	C	Existing Site Plan & GFA Diagram - Level 09	11.11.16
A9010	C	Existing Site Plan & GFA Diagram - Level 10	11.11.16
A9011	C	Existing Site Plan & GFA Diagram - Level 11	11.11.16
A9012	C	Existing Site Plan & GFA Diagram - Level 12	11.11.16
A9015	C	Existing Site Plan & GFA Diagram - Level 15	11.11.16
A9016	C	Existing Site Plan & GFA Diagram - Level 16	11.11.16

Proposed Modifications to Conditions of Consent for Mod 13

Condition A2 is deleted in its entirety and replaced with the following condition:

A2 Development in Accordance with Plans

The Approved Project is to be consistent with the following drawings:

Drawing No.	Revision	Name of plan	Date
AS90001	C	Site Plan	11.08.2017
AS900B4	D	Existing Site Plan & GFA Diagram - Level B4	11.08.2017
AS900B3	D	Existing Site Plan & GFA Diagram - Level B3	11.08.2017
AS900B2	D	Existing Site Plan & GFA Diagram - Level B2	11.08.2017
AS900B1	D	Existing Site Plan & GFA Diagram - Level B1	11.08.2017
AS90000	D	Existing Site Plan & GFA Diagram - Level 00	11.08.2017
AS90001	D	Existing Site Plan & GFA Diagram - Level 01	11.08.2017
AS90002	D	Existing Site Plan & GFA Diagram - Level 02	11.08.2017
AS90003	D	Existing Site Plan & GFA Diagram - Level 03	11.08.2017
AS90004	D	Existing Site Plan & GFA Diagram - Level 04	11.08.2017
AS90005	D	Existing Site Plan & GFA Diagram - Level 05	11.08.2017
AS90006	D	Existing Site Plan & GFA Diagram - Level 06	11.08.2017
AS90007	D	Existing Site Plan & GFA Diagram - Level 07	11.08.2017
AS90008	D	Existing Site Plan & GFA Diagram - Level 08	11.08.2017
AS90009	D	Existing Site Plan & GFA Diagram - Level 09	11.08.2017
AS90010	D	Existing Site Plan & GFA Diagram - Level 10	11.08.2017
AS90011	D	Existing Site Plan & GFA Diagram - Level 11	11.08.2017
AS90012	D	Existing Site Plan & GFA Diagram - Level 12	11.08.2017
AS90015	D	Existing Site Plan & GFA Diagram - Level 15	11.08.2017

MP08_0098 Conditions of Approval (including Mod 14)					Proposed Modifications to Conditions of Consent for Mod 13				
	A9017	C	Existing Site Plan & GFA Diagram - Level 17	11.11.16		AS9016	D	Existing Site Plan & GFA Diagram - Level 16	11.08.2017
	A9018	C	Existing Site Plan & GFA Diagram - Level 18	11.11.16		AS9017	D	Existing Site Plan & GFA Diagram - Level 17	11.08.2017
	A9019	C	Existing Site Plan & GFA Diagram – Roof	11.11.16		AS9018	D	Existing Site Plan & GFA Diagram - Level 18	11.08.2017
	A07B4	B	Demolition Plan - Level B04	15.09.16		AS9019	D	Existing Site Plan & GFA Diagram - Roof	11.08.2017
	A07B3	B	Demolition Plan - Level B03	15.09.16		AS07B4	G	Demolition Plan – Level B4	11.08.2017
	A07B2	B	Demolition Plan - Level B02	15.09.16		AS07B3	F	Demolition Plan – Level B3	11.08.2017
	A07B1	C	Demolition Plan - Level B01	15.09.16		AS07B2	F	Demolition Plan – Level B2	11.08.2017
	A0700	E	Demolition Plan - Level 00	05.05.17		AS07B1	F	Demolition Plan – Level B1	11.08.2017
	A0701	D	Demolition Plan - Level 01	05.05.17		AS0700	F	Demolition Plan – Level 00	11.08.2017
	A0702	D	Demolition Plan - Level 02	05.05.17		AS0701	F	Demolition Plan – Level 01	11.08.2017
	A0703	D	Demolition Plan - Level 03	05.05.17		AS0702	F	Demolition Plan – Level 02	11.08.2017
	A0704	B	Demolition Plan - Level 04	15.09.16		AS0703	F	Demolition Plan – Level 03	11.08.2017
	A0705	E	Demolition Plan - Level 05	05.05.17		AS0704	F	Demolition Plan – Level 04	11.08.2017
	A10B4	D	Proposed Site Plan - Level B04	05.05.17		AS0705	F	Demolition Plan – Level 05	11.08.2017
	A10B3	E	Proposed Site Plan - Level B03	15.09.16		AS0706	F	Demolition Plan – Level 06	11.08.2017
	A10B2	E	Proposed Site Plan - Level B02	11.04.17		AS10B4	F	Proposed Site Plan – Level B4	11.08.2017
	A10B1	E	Proposed Site Plan - Level B01	11.04.17		AS10B3	F	Proposed Site Plan – Level B3	11.08.2017
	A1000	F	Proposed Site Plan – Level 00	05.05.17		AS10B2	F	Proposed Site Plan – Level B2	11.08.2017
	A1001	E	Proposed Site Plan – Level 01	05.05.17		AS10B1	F	Proposed Site Plan – Level B1	11.08.2017
	A1002	F	Proposed Site Plan – Level 02	05.05.17		AS1000	F	Proposed Site Plan – Level 00	11.08.2017
	A1003	F	Proposed Site Plan – Level 03	05.05.17		AS1001	F	Proposed Site Plan – Level 01	11.08.2017
	A1004	E	Proposed Site Plan – Level 04	05.05.17		AS1002	F	Proposed Site Plan – Level 02	11.08.2017
	A1005	F	Proposed Site Plan – Level 05	05.05.17		AS1003	F	Proposed Site Plan – Level 03	11.08.2017
	A2000-1	F	Proposed Floor Plan - Level 00 - Part 1	05.05.17		AS1004	F	Proposed Site Plan – Level 04	11.08.2017

MP08_0098 Conditions of Approval (including Mod 14)					Proposed Modifications to Conditions of Consent for Mod 13				
	A2000-2	E	Proposed Floor Plan - Level 00 - Part 2	05.05.17		AS1005	F	Proposed Site Plan – Level 05	11.08.2017
	A2001	D	Proposed Floor Plan - Level 01	05.05.17		AS1006	F	Proposed Site Plan – Level 06	11.08.2017
	A2002	E	Proposed Floor Plan - Level 02	05.05.17		AS1007	F	Proposed Site Plan – Level 07	11.08.2017
	A2003-1	E	Proposed Floor Plan - Level 03 - Part 1	05.05.17		AS1009	E	Proposed Site Plan – Level 09	11.08.2017
	A2003-2	D	Proposed Floor Plan - Level 03 - Part 2	05.05.17		AS1011	D	Proposed Site Plan – Level 11	11.08.2017
	A2004	B	Proposed Floor Plan - Level 04	15.09.17		AS2051	D	South-West Corner – Floor Plans	11.08.2017
	A2005	D	Proposed Floor Plan - Level 05	11.04.17		AS5052	D	South-West Corner – 3D Image	11.08.2017
	A9100	E	Proposed GFA Diagram - Level 00	05.05.17		AS5053	D	South-West Corner – Floor Plans – Sheet 1	11.08.2017
	A9101	D	Proposed GFA Diagram - Level 01	11.04.17		AS5054	D	South-West Corner – Floor Plans – Sheet 2	11.08.2017
	A9102	B	Proposed GFA Diagram - Level 02	15.09.17		AS5055	E	South-West Corner – 3D Image – 3D Images & Sections	11.08.2017
	A9103	E	Proposed GFA Diagram - Level 03	05.05.17		AS2061	C	Proposed Level 00 Tenancy_F&B – 1 & 2	11.08.2017
	A9104	B	Proposed GFA Diagram - Level 04	15.09.17		AS2062	C	Proposed Level 00 Tenancy_F&B – 3, 4, 5 & 6	11.08.2017
	A9105	C	Proposed GFA diagram - level 05	14.02.17		AS2063	A	Proposed Level 02 Restaurant Tenancy	11.08.2017
	A4010	B	Building Elevations - sheet 1	15.09.16		AS2064	A	Pulse Escalator	11.08.2017
	A4011	D	Building Elevations - sheet 2	05.05.17		AS2072	E	Proposed Carpark Entry Plans – Pyrmont Street	11.08.2017
	A4012	C	Building Elevations - sheet 3	05.05.16		AS2073	E	Proposed Carpark Entry Images – Pyrmont Street	11.08.2017
	A5010	C	Building Sections - sheet 1	05.05.17		AS2080	D	Level 03 Capstone Plantroom	11.08.2017
	A5011	C	Building Sections - sheet 2	23.01.17		AS2081	D	Level 09 Cooling Tower Plant Room	11.08.2017
	A5012	C	Building Sections - sheet 3	15.09.16		AS91B4	E	Proposed Site Plan & GFA Diagrams – Level B4	11.08.2017
	A5013	C	Building Sections - sheet 4	05.05.16		AS91B3	E	Proposed Site Plan & GFA Diagrams – Level B3	11.08.2017
	A5014	C	Building Sections - sheet 5	05.05.17		AS91B2	F	Proposed Site Plan & GFA Diagrams – Level B2	11.08.2017
	A0010	B	Photomontage & Finishes Schedule	15.09.16		AS91B1	E	Proposed Site Plan & GFA Diagrams – Level B1	11.08.2017
	A0011	C	Photomontage & Finishes Schedule	23.01.17		AS9100	F	Proposed Site Plan & GFA Diagrams – Level 00	11.08.2017
	A0012	B	Photomontage & Finishes Schedule	15.09.16		AS9101	G	Proposed Site Plan & GFA Diagrams – Level 01	16.03.2018

MP08_0098 Conditions of Approval (including Mod 14)					Proposed Modifications to Conditions of Consent for Mod 13				
A0013	D	Photomontage & Finishes Schedule	05.05.17		AS9102	F	Proposed Site Plan & GFA Diagrams – Level 02	11.08.2017	
A0014	B	Photomontage & Finishes Schedule	15.09.16		AS9103	F	Proposed Site Plan & GFA Diagrams – Level 03	11.08.2017	
A0015	E	Photomontage & Finishes Schedule	05.05.17		AS9104	F	Proposed Site Plan & GFA Diagrams – Level 04	11.08.2017	
A7010	A	Internal elevations – ELS building and porte cochere	23.01.17		AS9105	F	Proposed Site Plan & GFA Diagrams – Level 05	11.08.2017	
A3000	C	SELS building scope of works	05.05.17		AS9106	E	Proposed Site Plan & GFA Diagrams – Level 06	11.08.2017	
A7018	4	Premium Departure Lounge – floor plan	16.02.17		AS9107	F	Proposed Site Plan & GFA Diagrams – Level 07	11.08.2017	
A7019	2	Premium Departure Lounge – elevations	18.08.16		AS9108	C	Proposed Residential GFA Diagrams	11.08.2017	
A6411	3	Water Feature Details	01.02.17		AS9109	C	Proposed Hotel GFA Diagram	11.08.2017	
MOD14-A92B2A	A	Existing Site Plan – Level B2	04.06.2017		AS9110	D	Total Proposed GFA Calculations	16.03.2018	
MOD14-A9200A	A	Existing Site Plan – Level B2	04.06.2017		AS4001	F	Building Elevations – Sheet 1	11.08.2017	
MOD14-A9201A	A	Existing Site Plan – Level 01	14.09.2017		AS4002	F	Building Elevations – Sheet 2	11.08.2017	
MOD14-A9202A	A	Existing Site Plan – Level 02	14.09.2017		AS4003	F	Building Elevations – Sheet 3	11.08.2017	
MOD14-A9203A	B	Existing Site Plan – Level 03	14.09.2017		AS5001	F	Building Sections – Sheet 1	11.08.2017	
MOD14-A9204A	A	Existing Site Plan – Level 04	04.06.2017		AS5002	F	Building Sections – Sheet 2	11.08.2017	
MOD14-A9205A	A	Existing Site Plan – Level 05	04.06.2017		AS5003	F	Building Sections – Sheet 3	11.08.2017	
MOD14-A9216A	A	Existing Site Plan – Level 16	04.06.2017		AS5004	F	Building Sections – Sheet 4	11.08.2017	
MOD14-A9217	A	Existing Site Plan – Level 17	14.09.2017		AS5005	F	Building Sections – Sheet 5	11.08.2017	
					AS9050	F	Signage – 3D View – Sheet 1	14.02.2018	
					AS9051	F	Signage – 3D View – Sheet 2	14.02.2018	
					AS9052	F	Signage – 3D View – Sheet 3	14.02.2018	
					AS9053	D	Signage Schedule	11.08.2017	
					AS9054	B	Signage Details – Sheet 1	11.08.2017	
					AS9055	B	Signage Details – Sheet 2	11.08.2017	
					AF100	DA01	B4 Car Stacker Floor Plan	01.09.2017	

MP08_0098 Conditions of Approval (including Mod 14)		Proposed Modifications to Conditions of Consent for Mod 13			
		AF101	DA01	B3 Floor Plan	01.09.2017
		AF102	DA01	B2 Hotel Entry Ground Floor Plan	01.09.2017
		AF1000	DA01	Level 00 Residential Entry Ground Floor Plan	01.09.2017
		AF1001	DA02	Level 01 + 02 Floor Plan	16.03.2018
		AF1003	DA01	Level 03 Floor Plan	01.09.2017
		AF1004	DA01	Level 04 + 04 Mezz Floor Plan	01.09.2017
		AF1005	DA01	Level 05 Sky Terrace	01.09.2017
		AF1006	DA01	Level 06 + 07 Pool Terrace Floor Plan	01.09.2017
		AF1008	DA01	Level 08 Pool Terrace Roof Plan	01.09.2017
		AF200	DA01	Basement Car Stacker Extent	01.09.2017
		AF201	DA01	B5 Floor Plan	01.09.2017
		AF202	DA01	B4 Floor Plan	01.09.2017
		AF203	DA01	B3 Floor Plan	01.09.2017
		AF204	DA01	B2 Floor Plan	01.09.2017
		AF2000	DA01	Level 00 Residential Entry Ground Floor Plan	01.09.2017
		AF2001	DA01	Level 01 Floor Plan	01.09.2017
		AF2002	DA01	Level 02 Floor Plan	01.09.2017
		AF2003	DA01	Level 03 Floor Plan	01.09.2017
		AF2004	DA01	Level 04 Floor Plan	01.09.2017
		AF2004	DA01	Level 04 Mezz Floor Plan	01.09.2017
		AF2005	DA01	Level 05 Sky Terrace	01.09.2017
		AF2006	DA01	Level 06 Floor Plan	01.09.2017
		AF2007	DA01	Level 07 Floor Plan	01.09.2017
		AF2008	DA01	Level 08 Floor Plan	01.09.2017

MP08_0098 Conditions of Approval (including Mod 14)		Proposed Modifications to Conditions of Consent for Mod 13			
		AF2009	DA01	Level 09 Floor Plan	01.09.2017
		AF2010	DA01	Level 10 Floor Plan	01.09.2017
		AF2011	DA01	Level 11 Floor Plan	01.09.2017
		AF2012	DA01	Level 12 Floor Plan	01.09.2017
		AF2014	DA01	Level 14 Floor Plan	01.09.2017
		AF2015	DA01	Level 15 Floor Plan	01.09.2017
		AF2016	DA01	Level 16 Floor Plan	01.09.2017
		AF2017	DA01	Level 17 Floor Plan	01.09.2017
		AF2018	DA01	Level 18 Floor Plan	01.09.2017
		AF2019	DA01	Level 19 Floor Plan	01.09.2017
		AF2020	DA01	Level 20 Floor Plan	01.09.2017
		AF2021	DA01	Level 21 Floor Plan	01.09.2017
		AF2022	DA01	Level 22 Floor Plan	01.09.2017
		AF2023	DA01	Level 23 Floor Plan	01.09.2017
		AF2024	DA01	Level 24 Floor Plan	01.09.2017
		AF2025	DA01	Level 25 Floor Plan	01.09.2017
		AF2026	DA01	Level 26 Floor Plan	01.09.2017
		AF2027	DA01	Level 27 Floor Plan	01.09.2017
		AF2028	DA01	Level 28 Floor Plan	01.09.2017
		AF2029	DA01	Level 29 Floor Plan	01.09.2017
		AF2030	DA01	Level 30 – 38 Floor Plan	01.09.2017
		AF2039	DA01	Level 39 Hotel Sky Lobby Floor Plan	01.09.2017
		AF2040	DA01	Level 40 Hotel Sky Lobby Mezzanine Floor Plan	01.09.2017
		AF2041	DA01	Level 41 Mid-Level Plant Floor Plan	01.09.2017

MP08_0098 Conditions of Approval (including Mod 14)		Proposed Modifications to Conditions of Consent for Mod 13			
		AF2042	DA01	Level 42 Level 42 Hotel BOH Floor Plan	01.09.2017
		AF2043	DA01	Level 43 – 45 Typical Hotel Floor Plan	01.09.2017
		AF2046	DA01	Level 46 – 57 Typical Hotel Floor Plan	01.09.2017
		AF2058	DA01	Level 58 Typical Hotel Floor Plan	01.09.2017
		AF2059	DA01	Level 59 Club Lounge + Terrace Floor Plan	01.09.2017
		AF2060	DA01	Level 60 Sky Villa Floor Plan	01.09.2017
		AF2061	DA01	Level 61 Sky Villa Floor Plan	01.09.2017
		AF2062	DA01	Level 62 Roof Plant Floor Plan	01.09.2017
		AF2063	DA01	Level 63 Roof Plant Floor Plan	01.09.2017
		AF2064	DA01	Level 64 Roof Plant Floor Plan	01.09.2017
		AF2065	DA01	Level 65 Roof Plant	01.09.2017
		AF2501	DA01	Adaptable Apartments Typical 1 Bed	01.09.2017
		AF2502	DA01	Adaptable Apartments Typical 2 Bed	01.09.2017
		AF2503	DA01	Adaptable Apartments Typical 3 Bed	01.09.2017
		AF300	DA01	B2 FFE Floor Plan	01.09.2017
		AF3000	DA01	Level 00 FFE Ground Floor Plan	01.09.2017
		AF4001	DA01	Pirrama Road Elevation	01.09.2017
		AF4002	DA01	Northern Elevation	01.09.2017
		AF4003	DA01	Jones Bay Road	01.09.2017
		AF4004	DA01	Southern Elevation	01.09.2017
		AF4101	DA01	Pirrama Road Street Elevation	01.09.2017
		AF4102	DA01	Jones Bay Road Street Elevation	01.09.2017
		AF4103	DA01	North & East Residential Elevation	01.09.2017
		AF4104	DA01	South & West Residential Elevation	01.09.2017

MP08_0098 Conditions of Approval (including Mod 14)		Proposed Modifications to Conditions of Consent for Mod 13			
	AF4201	DA01	Signage Eastern Elevation	01.09.2017	
	AF4202	DA01	Signage Western Elevation	01.09.2017	
	AF4203	DA01	Signage Detail Elevation – Tower East	01.09.2017	
	AF4204	DA01	Signage Detail Elevation – Tower West	01.09.2017	
	AF4205	DA01	Signage Detail Elevation – Podium East	01.09.2017	
	AF4206	DA01	Signage Detail Elevation – Pirrama Road	01.09.2017	
	AF4207	DA01	Signage Detail Elevation – Jones Bay Road	01.09.2017	
	AF4208	DA01	Signage Detail Elevation – Pirrama Road Tenancies	01.09.2017	
	AF5001	DA01	Section 01, Section 02	01.09.2017	
	AF5101	DA01	Section D01	01.09.2017	
	AF5102	DA01	Section D02	01.09.2017	
	AF6100	DA01	Podium GFA Plans	01.09.2017	
	AF6101	DA01	Podium GFA Plans	01.09.2017	
	AF6102	DA01	Podium GFA Plans	01.09.2017	
	AF6200	DA01	Tower Residential GFA Plans	01.09.2017	
	AF6300	DA01	Tower Hotel GFA Plans	01.09.2017	
	AF7000	DA01	External Finishes Board	01.09.2017	
	<u>Reason:</u> to account for amendments to the Architectural Drawings.				
	A3 Development in Accordance with Documents The development will be undertaken in accordance with the following documents: (1) Environmental Assessment Report prepared by Urbis on behalf of Sydney Harbour Casino Properties Pty Ltd, September 2008; (2) Preferred Project Report prepared by Urbis dated December 2008; (3) Transport Impact of Star City Redevelopment prepared by Arup dated September 2008 and supplementary report dated December 2008;		A3 Development in Accordance with Documents The development will be undertaken in accordance with the following documents: (1) Environmental Assessment Report prepared by Urbis on behalf of Sydney Harbour Casino Properties Pty Ltd, September 2008; (2) Preferred Project Report prepared by Urbis dated December 2008; (3) Transport Impact of Star City Redevelopment prepared by Arup dated September 2008 and supplementary report dated December 2008;		

Reason: to account for amendments to the Architectural Drawings.

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>(4) Limited Phase 1 Contamination Assessment prepared by Douglas Partners dated June 2008;</p> <p>(5) Heritage Impact Statement prepared by Urbis dated September 2008;</p> <p>(6) Visual Impact Assessment prepared by GM Urban Design & Architecture Pty Ltd dated September 2008;</p> <p>(7) Pedestrian Wind Environment Statement prepared by Windtech Consultants Pty Ltd dated September 11, 2008;</p> <p>(8) Crime Prevention Through Environmental Design report prepared by Urbis dated June 2008;</p> <p>(9) Traffic Impact of Star City Redevelopment prepared by ARUP dated September 2008;</p> <p>(10) Acoustic Assessment Report prepared by ARUP dated September 2008;</p> <p>(11) Assessment of Reflected Solar Glare from Glazed Facade Pirrama Road prepared by Bassett Consulting Engineers dated 8 September 2008 and supplementary report dated 12 December 2008;</p> <p>(12) Environmentally Sustainable Report prepared by Cundall dated September 2008;</p> <p>(13) Social Impact Assessment of project Star prepared by Urbis dated 27 June 2008;</p> <p>(14) Economic Impact Assessment prepared by Urbis dated 30 June 2008;</p> <p>(15) Accessibility Review prepared by Morris-Goding Accessibility Consulting dated 10 September 2008;</p> <p>(16) Preliminary Construction Management Plan prepared by APP Corporation Pty Limited dated September 2008;</p> <p>(17) Building Services Report prepared by Bassett Consulting Engineers dated 1 August 2008;</p> <p>(18) Hydraulic Services Report prepared by Steve Paul & Partners dated 25 June 2008;</p> <p>(19) BCA Capability Statement prepared by Philip Chun & Associates dated 11 September 2008 and further amended by BCA Review prepared by Philip Chun dated 10 August 2010; and</p> <p>(20) BCA Capability Statement prepared by Philip Chun & associates dated 10 May 2010</p>	<p>(4) Limited Phase 1 Contamination Assessment prepared by Douglas Partners dated June 2008;</p> <p>(5) Heritage Impact Statement prepared by Urbis dated September 2008;</p> <p>(6) Visual Impact Assessment prepared by GM Urban Design & Architecture Pty Ltd dated September 2008;</p> <p>(7) Pedestrian Wind Environment Statement prepared by Windtech Consultants Pty Ltd dated September 11, 2008;</p> <p>(8) Crime Prevention Through Environmental Design report prepared by Urbis dated June 2008;</p> <p>(9) Traffic Impact of Star City Redevelopment prepared by ARUP dated September 2008;</p> <p>(10) Acoustic Assessment Report prepared by ARUP dated September 2008;</p> <p>(11) Assessment of Reflected Solar Glare from Glazed Facade Pirrama Road prepared by Bassett Consulting Engineers dated 8 September 2008 and supplementary report dated 12 December 2008;</p> <p>(12) Environmentally Sustainable Report prepared by Cundall dated September 2008;</p> <p>(13) Social Impact Assessment of project Star prepared by Urbis dated 27 June 2008;</p> <p>(14) Economic Impact Assessment prepared by Urbis dated 30 June 2008;</p> <p>(15) Accessibility Review prepared by Morris-Goding Accessibility Consulting dated 10 September 2008;</p> <p>(16) Preliminary Construction Management Plan prepared by APP Corporation Pty Limited dated September 2008;</p> <p>(17) Building Services Report prepared by Bassett Consulting Engineers dated 1 August 2008;</p> <p>(18) Hydraulic Services Report prepared by Steve Paul & Partners dated 25 June 2008;</p> <p>(19) BCA Capability Statement prepared by Philip Chun & Associates dated 11 September 2008 and further amended by BCA Review prepared by Philip Chun dated 10 August 2010; and</p> <p>(20) BCA Capability Statement prepared by Philip Chun & associates dated 10 May 2010</p>
<p>As amended by Section 75W letter prepared by Urbis dated 19 August 2009 and the following documents:</p> <p>(1) Architectural Drawings nos. DA-005 and DA-006 Issue 1-prepared by Fitzpatrick+ Partners, dated August 2009</p> <p>(2) Landscape and Public Domain Design prepared by Tract Consultants, dated 12 August 2009;</p> <p>(3) Wind Environment Statement prepared by Windtech Consultants, dated 12 August 2009;</p> <p>(4) Addendum to CPTED Assessment prepared by Urbis, dated 10 August 2009;</p> <p>(5) Traffic Report Addendum prepared by ARUP, dated 11 August 2009;</p> <p>(6) Acoustic statement for Pirrama Road Façade Alternative Design Proposal prepared by Acoustic Logic Consultancy, dated 14 August</p>	<p>As amended by Section 75W letter prepared by Urbis dated 19 August 2009 and the following documents:</p> <p>(1) Architectural Drawings nos. DA-005 and DA-006 Issue prepared by Fitzpatrick+ Partners, dated August 2009</p> <p>(2) Landscape and Public Domain Design prepared by Tract Consultants, dated 12 August 2009;</p> <p>(3) Wind Environment Statement prepared by Windtech Consultants, dated 12 August 2009;</p> <p>(4) Addendum to CPTED Assessment prepared by Urbis, dated 10 August 2009;</p> <p>(5) Traffic Report Addendum prepared by ARUP, dated 11 August 2009;</p> <p>(6) Acoustic statement for Pirrama Road Façade Alternative Design Proposal prepared by Acoustic Logic Consultancy, dated 14 August 2009;</p> <p>(7) Assessment of Reflected Solar Glare from the Glazed Façade Facing</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>2009;</p> <p>(7) Assessment of Reflected Solar Glare from the Glazed Façade Facing Pirrama Road prepared by AECOM Australia, dated 13 August 2009;</p> <p>(8) Project Star ESD Revised Scheme Statement prepared by Cundall, dated 12 August 2009;</p> <p>(9) Accessibility Statement prepared by Morris Goding Accessibility Consulting, dated 12 August 2009;</p> <p>(10) BCA Capability Statement prepared by Philip Chun & Associates Pty Ltd, dated 13 August 2009; and</p> <p>(11) Impact on Fire Safety Engineering v3 Statement prepared by AECOM Australia, dated 19 August 2009.</p> <p>As amended by section 75W letter prepared by Urbis dated 16 September 2010 and the following documents:</p> <p>(1) BCA Capability Statement prepared by Phillip Chun & Associates Pty Ltd, dated 9 September 2010.</p> <p>As amended by the Section 75W Environmental Assessment Report prepared for MP08_0098 MOD 14 by Urbis Pty Ltd dated September 2016 and the following documents:</p> <p>(1) Environmental Assessment Report prepared by Urbis Pty Ltd on behalf of Star Entertainment Group limited dated September 2016 and the Response to Submissions Report dated May 2017;</p> <p>(2) Traffic Impact Assessment prepared by Mott MacDonald and the Traffic Response to Stakeholders Comments dated 2 March 2017.</p> <p>(3) Heritage Impact Statement prepared by Urbis dated September 2016 and the Heritage Response dated 3.03.2017;</p> <p>(4) Noise Impact Assessment prepared by WSP/Parsons Brinckerhoff dated September 2016 and the Supplementary Acoustic Report Revision 4 dated 12.05.2017;</p> <p>(5) Economic Impact Assessment of the Star Sydney prepared by PWC dated August 2016;</p> <p>(6) Social Impact Assessment prepared by Urbis dated September 2016;</p> <p>(7) Compliance letter prepared by McKenzie Group dated 16 September 2016;</p> <p>(8) Design Review Accessibility Compliance Statement prepared by McKenzie Group dated 16 September 2016;</p> <p>(9) Fire Life Safety Principles prepared by WSP/Parsons Brinckerhoff dated September 2016;</p> <p>(10) Sustainability Report prepared by WSP/Parsons Brinckerhoff dated September 2016 and the Comments on DOPE Response to Sustainability dated February 2017;</p> <p>(11) Marine Impact Assessment prepared by WSP/Parsons Brinckerhoff dated September 2016 the Comments on DOPE Responses to Harbour Heat Rejection System dated February 2017;</p> <p>(12) Electrical and Hydraulic Services Infrastructure Report prepared by Umow Lai dated September 2016 and the Hydraulic Services</p>	<p>(8) Pirrama Road prepared by AECOM Australia, dated 13 August 2009; Project Star ESD Revised Scheme Statement prepared by Cundall, dated 12 August 2009;</p> <p>(9) Accessibility Statement prepared by Morris Goding Accessibility Consulting, dated 12 August 2009;</p> <p>(10) BCA Capability Statement prepared by Philip Chun & Associates Pty Ltd, dated 13 August 2009; and</p> <p>(11) Impact on Fire Safety Engineering v3 Statement prepared by AECOM Australia, dated 19 August 2009.</p> <p>As amended by section 75W letter prepared by Urbis dated 16 September 2010 and the following documents:</p> <p>(1) BCA Capability Statement prepared by Phillip Chun & Associates Pty Ltd, dated 9 September 2010.</p> <p>As amended by the Section 75W Environmental Assessment Report prepared for MP08_0098 MOD 14 by Urbis Pty Ltd dated September 2016 and the following documents:</p> <p>(1) Environmental Assessment Report prepared by Urbis Pty Ltd on behalf of Star Entertainment Group limited dated September 2016 and the Response to Submissions Report dated May 2017;</p> <p>(2) Traffic Impact Assessment prepared by Mott MacDonald and the Traffic Response to Stakeholders Comments dated 2 March 2017.</p> <p>(3) Heritage Impact Statement prepared by Urbis dated September 2016 and the Heritage Response dated 3.03.2017;</p> <p>(4) Noise Impact Assessment prepared by WSP/Parsons Brinckerhoff dated September 2016 and the Supplementary Acoustic Report Revision 4 dated 12.05.2017;</p> <p>(5) Economic Impact Assessment of the Star Sydney prepared by PWC dated August 2016;</p> <p>(6) Social Impact Assessment prepared by Urbis dated September 2016;</p> <p>(7) Compliance letter prepared by McKenzie Group dated 16 September 2016;</p> <p>(8) Design Review Accessibility Compliance Statement prepared by McKenzie Group dated 16 September 2016;</p> <p>(9) Fire Life Safety Principles prepared by WSP/Parsons Brinckerhoff dated September 2016;</p> <p>(10) Sustainability Report prepared by WSP/Parsons Brinckerhoff dated September 2016 and the Comments on DOPE Response to Sustainability dated February 2017;</p> <p>(11) Marine Impact Assessment prepared by WSP/Parsons Brinckerhoff dated September 2016 the Comments on DOPE Responses to Harbour Heat Rejection System dated February 2017;</p> <p>(12) Electrical and Hydraulic Services Infrastructure Report prepared by Umow Lai dated September 2016 and the Hydraulic Services Infrastructure Report March 2017.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>Infrastructure Report March 2017.</p> <p>(13) SELS Heritage Building Façade – External Lighting Design Compliance and Plans prepared by Point of View dated 13 February 2017;</p> <p>(14) Proponents Statement of Commitments prepared by Urbis dated February 2017;</p> <p>(15) Environmentally Hazardous Chemicals Act, 1985 – Notice Under Section 35 dated 13 May 1994;</p> <p>(16) External Lighting Management Plan Revision 2 dated 9 August 2011 prepared by Meinhardt;</p> <p>(17) Loading Dock Management Plan prepared by Mott MacDonald dated 02 March 2017; and</p> <p>(18) Construction Pedestrian and Traffic Management Plan dated 02 March 2017.</p> <p>(19) The Star – Modification 14 Landscape Design report prepared by Urbis dated 15 May 2017</p>	<p>(13) SELS Heritage Building Façade – External Lighting Design Compliance and Plans prepared by Point of View dated 13 February 2017;</p> <p>(14) Proponents Statement of Commitments prepared by Urbis dated February 2017;</p> <p>(15) Environmentally Hazardous Chemicals Act, 1985 – Notice Under Section 35 dated 13 May 1994;</p> <p>(16) External Lighting Management Plan Revision 2 dated 9 August 2011 prepared by Meinhardt;</p> <p>(17) Loading Dock Management Plan prepared by Mott MacDonald dated 02 March 2017; and</p> <p>(18) Construction Pedestrian and Traffic Management Plan dated 02 March 2017.</p> <p>(19) The Star – Modification 14 Landscape Design report prepared by Urbis dated 15 May 2017</p> <p>As amended by the Section 75W Environmental Assessment Report prepared for MP08_0098 MOD 13 by Urbis Pty Ltd dated August 2018 and the following documents:</p> <p>(1) Landscape Plans prepared by Urbis (22 September 2017)</p> <p>(2) Landscape Design Report prepared by Urbis (20 March 2018)</p> <p>(3) Urban context Report prepared by Urbis (January 2018)</p> <p>(4) Visual Impact Assessment prepared by Architectus (June 2018)</p> <p>(5) Community Consultation Report prepared by KJA (25 January 2018)</p> <p>(6) Traffic Impact Statement prepared by Mott MacDonald (15 March 2018) and Microsimulation videos</p> <p>(7) Noise Impact Assessment prepared by WSP (12 June 2018)</p> <p>(8) Economic Impact Assessment prepared by PWC (December 2017)</p> <p>(9) Social Impact Assessment prepared by Urbis (28 March 2018)</p> <p>(10) CPTED Assessment prepared by Urbis (28 March 2018)</p> <p>(11) Aboriginal and Historical Archaeological Assessment prepared by Urbis (13 February 2018)</p> <p>(12) Heritage Impact Statement prepared by Urbis (27 June 2018)</p> <p>(13) Conservation Management Plan (19 February 2018)</p> <p>(14) Arboricultural Assessment prepared by Earthscape Horticultural Services (March 2018)</p> <p>(15) Airspace Application and Assessment prepared by Thompson GCS (19 April 2018)</p> <p>(16) Site-wide Lighting Management Plan prepared by WSP (31 January 2018)</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
	<p>(17) Sydney Observatory Sky View Loss Assessment prepared by UNSW (27 June 2017)</p> <p>(18) BCA Report prepared by McKenzie Group (30 January 2018)</p> <p>(19) Accessibility Design Review prepared by McKenzie Group (30 January 2018)</p> <p>(20) Fire Protection Assessment prepared by WSP (31 January 2018)</p> <p>(21) Fire Engineering Assessment prepared by WSP (7 January 2018)</p> <p>(22) Sustainability Report prepared by WSP (31 January 2018)</p> <p>(23) Electrical Infrastructure Report prepared by Umow Lai (31 January 2018) and connection application dated (19 January 2018)</p> <p>(24) Hydraulic Infrastructure Report prepared by Umow Lai (31 January 2018)</p> <p>(25) Water Management Report prepared by Umow Lai (31 January 2018)</p> <p>(26) Flood Impact Assessment prepared by TTW (31 January 2018)</p> <p>(27) Air Quality Report prepared by WSP (18 June 2018)</p> <p>(28) Pedestrian Wind Environment Assessment prepared by CPP (April 2018) and Wind Tunnel Letter (19 March 2018)</p> <p>(29) Solar Reflectivity Assessment prepared by CPP (March 2018)</p> <p>(30) Construction Management Plan prepared by Multiplex (27 June 2017)</p> <p>(31) Waste Management Plan prepared by WSP (31 January 2018)</p> <p>(32) Loading Dock Management Plan prepared by Change Logic (21 September 2017)</p> <p>(33) Mechanical Services prepared by WSP (31 January 2018)</p> <p>(34) Vertical Transportation Services prepared by WSP (1 December 2017)</p> <p>(35) Façade Report prepared by TTW (1 March 2018)</p> <p>(36) Structural Report – Tower prepared by WSP (15 September 2017)</p> <p>(37) Structural Report – Ribbon prepared by TTW (30 January 2018)</p> <p>(38) Geotechnical Assessment prepared by JK Geotechnics (November 2016)</p> <p>(39) Neighbourhood Centre Operational Plan of Management SEGL (6 February 2018)</p> <p>(40) Car Stacker Management Plan prepared by SEGL (14 February 2018)</p> <p>(41) Draft Green Travel Plan prepared by Mott MacDonald (21 August 2017)</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
	<p>(42) Contextual Analysis prepared by Urbis dated July 2018</p> <p>(43) Peer Review of Urban Context Report and Contextual Analysis prepared by Olsson and Associates Architects dated (27 June 2018)</p> <p>(44) Peer Review of Visual Impact Assessment prepared by Richard Lamb and Associates (3 July 2018)</p> <p>(45) Signage strategy prepared by Urbis (15 June 2018)</p> <p><u>Reason:</u> to reflect amendments to consultant inputs.</p>
<p>A3A Minor Works</p> <ol style="list-style-type: none"> 1. Works that are consistent with the types of development identified in Schedule 3 may be undertaken pursuant to this approval without the need for any further modification or approval, except on any part of land identified in as an item of environmental heritage in an environmental planning instrument. 2. Development shown on the plans approved in Condition A2 may be undertaken pursuant to this approval without the requirement for any further modification or approval where those works relate only to the relocation of gaming, storage, commercial, hotel, food and beverage, and entertainment floor space, internal to The Star Casino and where relocation internally of those uses does not result in a change to the total gaming floor space, and <ol style="list-style-type: none"> (a) the works do not change fire egress provisions of the approved building; (b) there are no changes to any external space; (c) there are no new external spaces or opening in the building proposed; and (d) there is no increase in GFA on site. 3. Prior to any works being undertaken in accordance with this condition, a Construction Certificate supported by all relevant technical assessments (provided by a suitably qualified consultant) must be obtained. Works must be carried out in accordance with relevant Australian Standards, the Building Code of Australia and any separate approvals, including those required outside the <i>Environmental Planning and Assessment Act 1979</i>. The Construction Certificate must be consistent with the relevant development standards set out in Schedule 3 and the relevant conditions of this or any other approval. 	<p>A3A Minor Works</p> <ol style="list-style-type: none"> 1. Works that are consistent with the types of development identified in Schedule 3 may be undertaken pursuant to this approval without the need for any further modification or approval, except on any part of land identified in as an item of environmental heritage in an environmental planning instrument. 2. Development shown on the plans approved in Condition A2 may be undertaken pursuant to this approval without the requirement for any further modification or approval where those works relate only to the relocation of gaming, storage, commercial, hotel, food and beverage, and entertainment floor space, residential uses and neighbourhood centre uses internal to The Star Casino and where relocation internally of those uses does not result in a change to the total gaming floor space, and <ol style="list-style-type: none"> (a) the works do not change fire egress provisions of the approved building; (b) there are no changes to any external space; (c) there are no new external spaces or opening in the building proposed; and (d) there is no increase in GFA on site. 3. Prior to any works being undertaken in accordance with this condition, a Construction Certificate supported by all relevant technical assessments (provided by a suitably qualified consultant) must be obtained. Works must be carried out in accordance with relevant Australian Standards, the Building Code of Australia and any separate approvals, including those required outside the <i>Environmental Planning and Assessment Act 1979</i>. The Construction Certificate must be consistent with the relevant development standards set out in Schedule 3 and the relevant conditions of this or any other approval. <p><u>Reason:</u> to account for the residential and neighbourhood centre uses to be included in the description of the Modification 13 application.</p>
<p>A4 Inconsistency between documents</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
In the event of any inconsistency between conditions of this approval and the drawings/documents referred to above, or the Statement of Commitments in Schedule 3, the conditions of this approval prevail.	
A5 Lapsing of Approval In order that the development as approved is carried out within a defined period of time, the approval shall lapse 5 years after the determination date in Part A of Schedule 1 of this approval.	No modification proposed as part of Modification 13.
A6 Sydney Electric Lighting Station – internal fitout The fitout to the retail tenancy in the SELS Building does not form part of this Proposal and is to be the subject of a future development application.	No modification proposed as part of Modification 13.
A7 Limits of this approval This approval does not govern the operation of the spaces which are the subject of the City of Sydney development consents identified on Drawings Nos. MOD14-A92B2A, MOD14-A9200A, MOD14-A9201A, MOD14-A9202A, MOD14-A9203A, MOD14-A9204A, MOD14-A9205A, MOD14-A9216A and MOD14-A9217A (prepared by DWP Suters, various dates) as identified in Condition A2 of this approval.	No modification proposed as part of Modification 13.
A8 Surrender of consents The Proponent shall provide notice to City of Sydney of the voluntary surrender of the following development consents in accordance with clause 104A of the <i>Environmental Planning and Assessment Act 1979</i> within three months of the approval of Modification 14: <ul style="list-style-type: none"> • D/2015/233 – Darling VIP gaming – private indoor games room and smoking terraces (facing Union Street); • D/2015/1515 – Northwest gaming works involves extension of gaming area of porte cochere (Pyrmont Street); • D/2015/1072 – Oasis unenclosed gaming area adjacent to Pyrmont Street; • D/2012/843 – Oasis Gaming Room – works to install new glazed partitioning, access doors and reconfigure Oasis Gaming Room; and • D/2013/1975 – Sovereign room alterations – Minor alterations and additions to sovereign room. 	A8 Surrender of consents The Proponent shall provide notice to City of Sydney of the voluntary surrender of the following development consents in accordance with clause 104A of the <i>Environmental Planning and Assessment Act 1979</i> within three months of the approval of Modification 14: <ul style="list-style-type: none"> • D/2015/233 – Darling VIP gaming – private indoor games room and smoking terraces (facing Union Street); • D/2015/1515 – Northwest gaming works involves extension of gaming area of porte cochere (Pyrmont Street); • D/2015/1072 – Oasis unenclosed gaming area adjacent to Pyrmont Street; • D/2012/843 – Oasis Gaming Room – works to install new glazed partitioning, access doors and reconfigure Oasis Gaming Room; and • D/2013/1975 – Sovereign room alterations – Minor alterations and additions to sovereign room. <p>The Proponent shall provide notice to City of Sydney of the voluntary surrender of the following development consents in accordance with clause 4.63 of the <i>Environmental Planning and Assessment Act 1979</i> within three months of the approval of Modification 13:</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
	<ul style="list-style-type: none"> • D2011/18 – Fitout of 185 seat licensed restaurant (on-licence) known as Project TnT within Star City Casino trading 7.00am to 2.00am daily (Black). • D2011/19 – Fitout of 185 seat licensed restaurants (on-licence) know as project Canale within Star City Casino (Balla); • D2011/988 – Astral Hotel and Residences Signage; • D2011/987 – The Darling Signage • D2011/986 – Replacement of existing illuminated building identification signage on the north-eastern elevation of the Star City Casino lift shard; • D2012/431 – Sokyo Restaurant Signage; • D2012/1006 – Modification to the pool and landscaping on the roof of Level 3, modification to the entry ring located on the roof of Level 3, extension to existing plantroom at Level 6 and erection of new external stairs to the plantroom. • D/2013/1259 – Change of use and fitout of 'retail space 22' on Pirrama Road to a licensed restaurant, including alterations to the façade, outdoor seating and umbrellas (Pizzaperta); • D2014/355 – Change of use to part of Level 1 of The Star to a new licensed restaurant (505 patrons) called 'The Star Buffet'. External alterations including the enclosure of an existing balcony on Level 1 for storage and a new plant room on the Level 3 terrace; • D2015/1187 – Conversion of hotel suites on level 5 of the Astral Tower Hotel to be used as a new business centre and VIP check-in and guest lounge; • D2015/479 – Installation of free standing steel signage and associated lighting to existing garden bed (THE STAR letters); • D2015/1826 – Addition of 4 new lifts within the existing observation lift core within the 'Astral Hotel' serving level 1, 3 and 5, and erection of a temporary marquee over the 'Sky Terrace' on Level 03. • D2016/1368 – Removal of existing glass partition with signage. New solid partition with signage 'Gojima;' <p><u>Reason:</u> to account for additional consents to be surrendered.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
Part B – Prior to the Issue of Construction Certificate	
<p>B1 External art work and lighting</p> <p>The Proponent is to commission a reputable and appropriately experienced artist to develop artwork and feature lighting displays to the Pirrama Road frontage. Details are to be approved by the Department prior to the issue of Construction Certificate for any art work and feature lighting works to the Pirrama Road frontage, and any video signage or display proposed on the site.</p>	<p>B1 External art work and lighting</p> <p>All lighting works are to be in accordance with the Site-Wide Lighting Management Plan prepared by WSP dated 31 January 2018. The Proponent is to commission a reputable and appropriately experienced artist to develop artwork and feature lighting displays to the Pirrama Road frontage. Details are to be approved by the Department prior to the issue of Construction Certificate for any art work and feature lighting works to the Pirrama Road frontage, and any video signage or display proposed on the site.</p> <p><u>Reason:</u> to account for the Lighting Management Plan being superseded by a newer version.</p>
<p>B2 Hotel Height</p> <p>The height of the hotel is to be reduced by 3 storeys resulting in a 10 storey tower above a 3 storey podium. A lesser reduction in height may be achieved subject to detailed plans demonstrating that the upper-most structure of the hotel tower (including ceiling level, cladding and handrails but excluding plant and lift over-runs) does not exceed RL 153.16. Note: RLs are to be consistent with RLs identified in the approved documents at condition A2. Amended plans are to be submitted to the Department for approval prior to the issue of a Construction Certificate for any works on the Switching Station Site</p>	<p>B2 Darling Hotel Height</p> <p>The height of the Darling Hotel is to be reduced by 3 storeys resulting in a 10 storey tower above a 3 storey podium. A lesser reduction in height may be achieved subject to detailed plans demonstrating that the upper-most structure of the hotel tower (including ceiling level, cladding and handrails but excluding plant and lift over-runs) does not exceed RL 153.16. Note: RLs are to be consistent with RLs identified in the approved documents at condition A2. Amended plans are to be submitted to the Department for approval prior to the issue of a Construction Certificate for any works on the Switching Station Site.</p> <p><u>Reason:</u> to specify which hotel Condition B2 refers to.</p>
<p>B3 Car Parking</p> <p>The maximum number of car parking spaces on the whole site (Casino and Switching Station) is not to exceed 3,000. Plans reflecting this are to be submitted to the PCA prior to the issue of a Construction Certificate for basement car parking works.</p>	<p>B3 Car Parking</p> <p>The maximum number of car parking spaces on the whole site (Casino, Ritz Carlton Hotel and Residential Tower car stacker and Switching Station) is not to exceed 3,000. Plans reflecting this are to be submitted to the PCA prior to the issue of a Construction Certificate for basement car parking and car stacker works.</p> <p><u>Reason:</u> to specify the maximum car parking spaces referencing the whole of the site and to include the car stacker.</p>
<p>B4 Sydney Metro Authority</p> <p>(1) The Proponent is to enter into agreements with Sydney Metro Authority for the following stages: a) an Excavation Agreement prior to the commencement of any excavation works; and b) a Construction Agreement prior to commencement of excavation below 95.9RL, or of construction to address the potential impacts of the Approved Project on the CBD Metro prior to the issue of a Construction Certificate in respect of each of the above stages.</p> <p>(2) In regard to the agreement for the works in Condition B4 (1)(b), the location of any building footing must be determined in consultation with Sydney Metro Authority prior to the issue of a Construction Certificate involving excavation works below 95.9RL to ensure the structural integrity of the CBD Metro.</p> <p>(3) In regard to the agreement for the works in Condition B4(1) (b), all structures proposed for construction and installation must be designed and constructed in consultation with Sydney</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>Metro Authority to ensure the structural integrity of the CBD Metro, and details are to be provided to the Certifying Authority prior to the issue of a Construction Certificate for excavation works below 95.9RL.</p>	
<p>B5 Noise Management Plan</p> <p>A Noise Management Plan is to be prepared in consultation with the City of Sydney, addressing the following.</p> <p>(1) Further mitigation measures and treatments including additional acoustic - absorptive finishes and alternative perimeter treatments to the outdoor gaming and terrace areas.</p> <p>(2) The operation of all gaming and entertainment areas, including the external areas. The Noise Management Plan is to address the Mitigation Measures included in the letter from Bassett Consulting Engineers dated 3 December 2008.</p> <p>(3) In relation to the MUEF Project and the works shown on the drawings approved as part of Modification 7, a separate Noise Management Plan is to be prepared in consultation with the City of Sydney Council. The report shall detail how the noise mitigation measures recommended in the Acoustic Report prepared by AECOM dated 7th October 2010, will be implemented. The Plan is to be submitted to the Department for approval prior to the issue of a Construction Certificate for the MUEF works.</p> <p>(4) The Noise Management Plan is to be submitted to the Department for approval prior to issue of a Construction Certificate for above ground works.</p>	<p>B5 Noise Management Plan</p> <p>A Noise Management Plan is to be prepared in consultation with the City of Sydney, addressing the following:</p> <p>(1) Further mitigation measures and treatments including additional acoustic - absorptive finishes and alternative perimeter treatments to the outdoor gaming and terrace areas.</p> <p>(2) The operation of all gaming and entertainment areas, including the external areas. The Noise Management Plan is to address measures to achieve the conditions of this approval including Condition F5, address the Mitigation Measures included in the letter from Bassett Consulting Engineers dated 3 December 2008.</p> <p>(3) In relation to the MUEF Project and the works shown on the drawings approved as part of Modification 7, a separate Noise Management Plan is to be prepared in consultation with the City of Sydney Council. The report shall detail how the noise mitigation measures recommended in the Acoustic Report prepared by AECOM dated 7th October 2010, will be implemented. The Plan is to be submitted to the Department for approval prior to the issue of a Construction Certificate for the MUEF works.</p> <p>(4) The Noise Management Plan is to be submitted to the Department for approval prior to issue of a Construction Certificate for above ground works.</p> <p><u>An Operational Noise Management Plan (ONMP) is to be prepared for the site in consultation with the City of Sydney. The ONMP is to be submitted to the Department for approval prior to issue of a Construction Certificate for above-ground works associated with Modification 13 and is to incorporate the following:</u></p> <ul style="list-style-type: none"> <u>Location of noise sensitive receivers</u> <u>Noise emission criteria at noise sensitive receivers</u> <u>Management strategies</u> <u>Performance certification protocols</u> <u>Complaints handling procedures</u> <p><u>Reason:</u> Altered to ensure new ONMP is developed and put in place for the site.</p>
	<p>B5A – Noise Verification Plan</p> <p>A Noise Verification Plan (NVP) is to be prepared for the site. The NVP is to be submitted as part of the Operational Noise Management Plan as required by Condition B5.</p> <p>The NVP shall nominate Noise Control Points (NCP) on The Star site. The NCPs should be located where they will be representative of a sound source (or group of sound sources) contributing to the cumulative noise level controlled by Condition F5A at the most exposed off site noise sensitive receivers.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
	<p>The NVP will nominate an L10 octave band sound pressure level Noise Control Level (NCL) at each NCP such that where the sound level satisfies the NCL, it will also satisfy the relevant criteria of Condition F5A at the receiver it represents, taking into account the cumulative total from all relevant noise sources.</p> <p>Condition F5 - Noise (Licenced Premises) is verified if the measured L10 octave band sound pressure levels at the NCP do not exceed the NCL</p> <p>The NVP shall be prepared by an appropriately qualified Acoustic Consultant who has full membership of the Australian Acoustic Society or who is employed by a member firm of the Association of Australasian Acoustical Consultants</p> <p><u>Reason:</u> new condition proposed to ensure ongoing monitoring of noise from licensed premises (Condition F5A).</p>
<p>B6 Noise Attenuation Measures</p> <p>(1) Prior to issue of a Construction Certificate, the Proponent shall submit to the satisfaction of the Certifying Authority, drawings and documentation demonstrating that the construction and fit out of the building incorporates the recommendations of the Acoustic Assessment Report prepared by ARUP, September 2008 and letter from Bassett Consulting Engineers dated 3 December 2008, and suitable to achieve compliance with condition F5.</p> <p>(2) Prior to the issue of a Construction Certificate for the MUEF works approved under Modification 7, the Proponent shall submit to the satisfaction of the Certifying Authority, drawings and documentation demonstrating that the construction and fit out of the building incorporates the recommendations of the Acoustic Assessment Report prepared by AECOM dated 7 October 2010, and will comply with condition F5.</p>	<p>B6 Noise Attenuation Measures</p> <p>(1) Prior to issue of a Construction Certificate, the Proponent shall submit to the satisfaction of the Certifying Authority, drawings and documentation demonstrating that the construction and fit out of the building incorporates the recommendations of the Acoustic Assessment Report prepared by ARUP, September 2008 and letter from Bassett Consulting Engineers dated 3 December 2008 Noise Impact Assessment prepared by WSP dated 12 June 2018, and suitable o achieve compliance with condition F5.</p> <p>(2) Prior to the issue of a Construction Certificate for the MUEF works approved under Modification 7, the Proponent shall submit to the satisfaction of the Certifying Authority, drawings and documentation demonstrating that the construction and fit out of the building incorporates the recommendations of the Acoustic Assessment Report prepared by AECOM dated 7 October 2010, and will comply with condition F5.</p> <p><u>Reason:</u> to account for the Noise Impact Assessment being superseded by a newer version.</p>
<p>B7 Wind Impacts</p> <p>Mitigation measures as recommended in the Pedestrian Wind Environment Statement prepared by Windtech, are to be implemented and details submitted to the Certifying Authority prior to issue of a Construction Certificate for above ground works.</p>	<p>B7 Wind Impacts</p> <p>Mitigation measures as recommended in the Pedestrian Wind Environment Statement prepared by Windtech Pedestrian Wind Environmental Assessment prepared by CPP dated April 2018, are to be implemented and details submitted to the Certifying Authority prior to issue of a Construction Certificate for above ground works.</p> <p><u>Reason:</u> to account for the Pedestrian Wind Environment Assessment being superseded by a newer version.</p>
<p>B8 Reflectivity</p> <p>Reflectivity measures, including vertical glazing and glass characteristic, as recommended in the Assessment of Reflected Solar Glare from Glazed Facade Pirrama Road prepared by Bassett Consulting Engineers dated 12 December 2008, are to be implemented and details submitted to the Certifying Authority prior to commencement of works. Total reflectivity is not to exceed 20%.</p>	<p>B8 Reflectivity</p> <p>Reflectivity mitigation measures including vertical glazing and glass characteristic, as recommended in the Assessment of Reflected Solar Glare from Glazed Facade Pirrama Road prepared by Bassett Consulting Engineers dated 12 December 2008 recommended in the Solar Reflectivity Assessment prepared by CPP dated 22 March 2018 are to be implemented and details submitted to the Certifying Authority prior to commencement of works. Total reflectivity is not to exceed 20%</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
	<p><u>Reason:</u> The recommendations and mitigation measures have been superseded by the Solar Reflectivity Assessment prepared by CPP dated 22 March 2018.</p>
<p>B9 Public Domain</p> <p>All works associated with the approval which encroach upon or are immediately adjacent to Council's public domain areas are to be designed and developed in consultation with Council. Details to be provided prior to issue of a Construction Certificate for the public domain works. The RLs and alignment, for any works associated with the approval which encroach upon or are immediately adjacent to Council's public domain areas, must be provided to the satisfaction of the Department prior to the issue of a Construction Certificate for the relevant works.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>B9A Public Domain Works</p> <p>(1) Alignment Levels – Major Development Between Gridlines 23 And F</p> <p>(a) Proposed building floor levels, basement levels, basement car park entry levels and ground levels shown on the approved plans are indicative only and have not been approved by this consent.</p> <p>(b) Prior to a Construction Certificate being issued for any excavation, civil construction, drainage or building work relating to the public domain (whichever is earlier), excluding approved preparatory or demolition work, alignment levels for the building and site frontages must be submitted to and approved by the City of Sydney. The submission must be prepared by a Registered Surveyor, must be in accordance with the City of Sydney's <i>Public Domain Manual</i> and must be submitted with a completed Alignment Levels checklist (available in the <i>Public Domain Manual</i>) and Footpath Levels and Gradients Approval Application form (available on the City of Sydney's website).</p> <p>(c) These alignment levels, as approved by the City of Sydney are to be incorporated into the plans submitted with the application for a Construction Certificate for any civil, drainage and public domain work as applicable under this consent. If the proposed detailed design of the public domain requires changes to any previously approved Alignment Levels, then an amended Alignment Levels submission must be submitted to and approved by the Secretary to reflect these changes prior to a Construction Certificate being issued for public domain work.</p> <p>(2) Paving Materials</p> <p>The surface of any material used or proposed to be used for the paving of colonnades, thoroughfares, plazas, arcades and the like which are used by the</p>	<p>B9A Public Domain Works</p> <p>(1) Alignment Levels – Major Development Between Gridlines 23 And F</p> <p>(a) Proposed building floor levels, basement levels, basement car park entry levels and ground levels shown on the approved plans are indicative only and have not been approved by this consent.</p> <p>(b) Prior to a Construction Certificate being issued for any excavation, civil construction, drainage or building work relating to the public domain (whichever is earlier), excluding approved preparatory or demolition work, alignment levels for the building and site frontages must be submitted to and approved by the City of Sydney. The submission must be prepared by a Registered Surveyor, must be in accordance with the City of Sydney's <i>Public Domain Manual</i> and must be submitted with a completed Alignment Levels checklist (available in the <i>Public Domain Manual</i>) and Footpath Levels and Gradients Approval Application form (available on the City of Sydney's website).</p> <p>(c) These alignment levels, as approved by the City of Sydney are to be incorporated into the plans submitted with the application for a Construction Certificate for any civil, drainage and public domain work as applicable under this consent. If the proposed detailed design of the public domain requires changes to any previously approved Alignment Levels, then an amended Alignment Levels submission must be submitted to and approved by the Secretary to reflect these changes prior to a Construction Certificate being issued for public domain work.</p> <p>(2) Paving Materials</p> <p>The surface of any material used or proposed to be used for the paving of colonnades, thoroughfares, plazas, arcades and the like which are used by the</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>public must comply with AS/NZS 4586:2004 (including amendments) "Slip resistance classification of new pedestrian surface materials".</p> <p>(3) Preservation of Survey Marks</p> <p>All works must ensure the preservation of existing permanent survey marks (a brass bolt, or a lead plug holding a brass tack, covered by a cast iron box). At least forty- eight hours prior to the commencement of any works in the public way within 1 metre of a permanent survey mark contact must be made with the City of Sydney's Project Manager Survey / Design Services to arrange for the recovery of the mark.</p> <p>Prior to the issue of a Construction Certificate for the level 3 Sovereign Room Expansion, a survey plan, clearly showing the location of all permanent survey marks fronting the site and within 5 metres on each side of the frontages must be submitted to City of Sydney.</p> <p>At least forty-eight hours prior to the commencement of any works in the public way within 1 metre of a permanent survey mark contact must be made with the City of Sydney's Senior Surveyor to arrange for the recovery of the mark.</p> <p>A fee must be paid to the City of Sydney for the replacement of any permanent survey mark removed or damaged in accordance with the City's Schedule of Fees and Charges (Reinstatement of Survey Box).</p> <p>(4) Protection of Survey Infrastructure</p> <p>Prior to the commencement of any work for the level 3 Sovereign Room expansion, a statement prepared by a Surveyor registered under the <i>Surveying Act 2002</i> must be submitted to Council verifying that a survey has been carried out in accordance with the Surveyor General's Direction No. 11 – Reservation of Survey Infrastructure. Any Permanent Marks proposed to be or have been destroyed must be replaced, and a "Plan of Survey Information" must be lodged at the Land and Property Management Authority.</p> <p>(5) Public Domain Plan Between Gridlines 23 And F</p> <p>(a) A detailed Public Domain Plan must be prepared by a suitably qualified architect, urban designer, landscape architect or engineer and must be lodged with Council's Public Domain Section and be approved by the Secretary prior to a Construction Certificate being issued for public domain work or above ground building work, whichever is later.</p> <p>(b) The Public Domain Plan must provide for the upgrade of:</p> <p>i. The paving along Jones Bay Road to connect with the</p>	<p>public must comply with AS/NZS 4586:2004 (including amendments) "Slip resistance classification of new pedestrian surface materials".</p> <p>(3) Preservation of Survey Marks</p> <p>All works must ensure the preservation of existing permanent survey marks (a brass bolt, or a lead plug holding a brass tack, covered by a cast iron box). At least forty- eight hours prior to the commencement of any works in the public way within 1 metre of a permanent survey mark contact must be made with the City of Sydney's Project Manager Survey / Design Services to arrange for the recovery of the mark.</p> <p>Prior to the issue of a Construction Certificate for the level 3 Sovereign Room Expansion, a survey plan, clearly showing the location of all permanent survey marks fronting the site and within 5 metres on each side of the frontages must be submitted to City of Sydney.</p> <p>At least forty-eight hours prior to the commencement of any works in the public way within 1 metre of a permanent survey mark contact must be made with the City of Sydney's Senior Surveyor to arrange for the recovery of the mark.</p> <p>A fee must be paid to the City of Sydney for the replacement of any permanent survey mark removed or damaged in accordance with the City's Schedule of Fees and Charges (Reinstatement of Survey Box).</p> <p>(4) Protection of Survey Infrastructure</p> <p>Prior to the commencement of any work for the level 3 Sovereign Room expansion, a statement prepared by a Surveyor registered under the <i>Surveying Act 2002</i> must be submitted to Council verifying that a survey has been carried out in accordance with the Surveyor General's Direction No. 11 – Reservation of Survey Infrastructure. Any Permanent Marks proposed to be or have been destroyed must be replaced, and a "Plan of Survey Information" must be lodged at the Land and Property Management Authority.</p> <p>(5) Public Domain Plan Between Gridlines 23 And F</p> <p>(a) A detailed Public Domain Plan must be prepared by a suitably qualified architect, urban designer, landscape architect or engineer and must be lodged with Council's Public Domain Section and be approved by the Secretary prior to a Construction Certificate being issued for public domain work or above ground building work, whichever is later.</p> <p>(b) The Public Domain Plan must provide for the upgrade of:</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>intersection of Pyrmont Street, and along Pyrmont Street to connect with the intersection with Jones Bay Road; and</p> <p>ii. The existing pedestrian crossing on Jones Bay Road to current standards</p> <p>(c) The Public Domain Plan must document all works required to ensure that the public domain complies with the City of Sydney's <i>Public Domain Manual</i>, <i>Sydney Streets Design Code</i> and <i>Sydney Streets Technical Specification</i>, including requirements for road pavement, traffic measures, footway pavement, kerb and gutter, drainage, vehicle crossovers, pedestrian ramps, lighting, street trees and landscaping, signage and other public domain elements. If an Alignment Levels condition applies to the development, the Public Domain Plan submission must incorporate the approved Alignment Levels. If the proposed detailed design of the public domain requires changes to any previously approved Alignment Levels, then an amended Alignment Levels submission must be submitted to and approved by City of Sydney to reflect these changes prior to a Construction Certificate being issued for public domain work.</p> <p>(d) The works to the public domain are to be completed in accordance with the approved Public Domain Plan and Alignment Levels plans and the <i>Public Domain Manual</i> before any Occupation Certificate is issued for the level 3 Sovereign Room expansion.</p> <p>(e) A Public Domain Works Deposit will be required for the public domain works, in accordance with the City of Sydney's adopted fees and charges and the <i>Public Domain Manual</i>. The Public Domain Works Deposit must be submitted as an unconditional bank guarantee in favour of Council as security for completion of the obligations under this consent.</p> <p>(f) City of Sydney's Public Domain section must be contacted to determine the guarantee amount prior to lodgement of the guarantee. The guarantee must be lodged with Council prior to a Construction Certificate being issued for the level 3 Sovereign Room expansion.</p> <p>(g) The Bank Guarantee will be retained in full until all Public Domain works are completed and the required certifications, warranties and works-as-executed documentation are submitted and approved by Council in writing. On satisfying the above requirements, 90% of the total securities will be released. The remaining 10% will be retained for the duration of the specified Defects Liability Period.</p>	<p>iii. The paving along Jones Bay Road to connect with the intersection of Pyrmont Street, and along Pyrmont Street to connect with the intersection with Jones Bay Road; and</p> <p>iv. The existing pedestrian crossing on Jones Bay Road to current standards</p> <p>(c) The Public Domain Plan must document all works required to ensure that the public domain complies with the City of Sydney's <i>Public Domain Manual</i>, <i>Sydney Streets Design Code</i> and <i>Sydney Streets Technical Specification</i>, including requirements for road pavement, traffic measures, footway pavement, kerb and gutter, drainage, vehicle crossovers, pedestrian ramps, lighting, street trees and landscaping, signage and other public domain elements. If an Alignment Levels condition applies to the development, the Public Domain Plan submission must incorporate the approved Alignment Levels. If the proposed detailed design of the public domain requires changes to any previously approved Alignment Levels, then an amended Alignment Levels submission must be submitted to and approved by City of Sydney to reflect these changes prior to a Construction Certificate being issued for public domain work.</p> <p>(d) The works to the public domain are to be completed in accordance with the approved Public Domain Plan and Alignment Levels plans and the <i>Public Domain Manual</i> before any Occupation Certificate is issued for the level 3 Sovereign Room expansion. However, in the event that construction of Mod 13 has commenced, which prevents the completion of these works, a bond or bank guarantee is to be submitted to the Department of Planning & Environmental to the value of \$TBC and the works are to be completed prior to issue of the Occupation Certificate of the Ritz-Carlton Hotel and Residential Tower. The bond is to be released by the Department upon completed of the works.</p> <p>Reason: to account for the staging of construction works associated with Mod 13.</p> <p>(e) A Public Domain Works Deposit will be required for the public domain works, in accordance with the City of Sydney's adopted fees and charges and the <i>Public Domain Manual</i>. The Public Domain Works Deposit must be submitted as an unconditional bank guarantee in favour of Council as security for completion of the obligations under this consent.</p> <p>(f) In relation to paragraph (e) above, City of Sydney's Public Domain section must be contacted to determine the guarantee amount prior to lodgement of the guarantee. The guarantee must be lodged with Council prior to a Construction Certificate being issued for the level 3 Sovereign Room expansion.</p> <p>(g) The Bank Guarantee will be retained in full until all Public Domain works</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>(6) Public Domain Works - Hold Points and Handover</p> <p>(a) Prior to a Construction Certificate being issued for public domain work, including civil, drainage and subsurface works, a set of hold points for approved public domain, civil and drainage work is to be determined with and approved by the City's Public Domain section in accordance with the City of Sydney's <i>Public Domain Manual</i> and <i>Sydney Streets Technical Specification</i>.</p> <p>(b) Prior to a Certificate of Completion being issued for public domain works and before the issue of an Occupation Certificate for the Level 3 Sovereign Room expansion (excluding the Sovereign Room Swing Space) or before the use commences, whichever is earlier, electronic works-as-executed (as-built) plans and documentation, certified by a suitably qualified, independent professional must be submitted to and accepted by Council for all public domain works. Completion and handover of the constructed public domain works must be undertaken in accordance with the City of Sydney's <i>Public Domain Manual</i> and <i>Sydney Streets Technical Specification</i>, including requirements for as-built documentation, certification, warranties and the defects liability period.</p> <p>(7) Drainage and service pit lids</p> <p>Drainage and service pit lids throughout the public domain shall be heelguard and bicycle safe, finish flush with the adjacent pavement to avoid trip hazards and be clear of obstructions for easy opening and cleaning. Pit lids shall be in accordance with the City of Sydney's <i>Sydney Streets Design Code</i> and <i>Sydney Streets Technical Specification</i>. Details of drainage and service pit lids shall be submitted and approved by Council prior to a Construction Certificate being issued for the relevant stage of work.</p>	<p>are completed and the required certifications, warranties and works-as-executed documentation are submitted and approved by Council in writing. On satisfying the above requirements, 90% of the total securities will be released. The remaining 10% will be retained for the duration of the specified Defects Liability Period.</p> <p>(6) Public Domain Works - Hold Points and Handover</p> <p>(a) Prior to a Construction Certificate being issued for public domain work, including civil, drainage and subsurface works, a set of hold points for approved public domain, civil and drainage work is to be determined with and approved by the City's Public Domain section in accordance with the City of Sydney's <i>Public Domain Manual</i> and <i>Sydney Streets Technical Specification</i>.</p> <p>(b) Prior to a Certificate of Completion being issued for public domain works and before the issue of an Occupation Certificate for the Level 3 Sovereign Room expansion (excluding the Sovereign Room Swing Space) or before the use commences, whichever is earlier, electronic works-as-executed (as-built) plans and documentation, certified by a suitably qualified, independent professional must be submitted to and accepted by Council for all public domain works. Completion and handover of the constructed public domain works must be undertaken in accordance with the City of Sydney's <i>Public Domain Manual</i> and <i>Sydney Streets Technical Specification</i>, including requirements for as-built documentation, certification, warranties and the defects liability period.</p> <p>(7) Drainage and service pit lids</p> <p>Drainage and service pit lids throughout the public domain shall be heelguard and bicycle safe, finish flush with the adjacent pavement to avoid trip hazards and be clear of obstructions for easy opening and cleaning. Pit lids shall be in accordance with the City of Sydney's <i>Sydney Streets Design Code</i> and <i>Sydney Streets Technical Specification</i>. Details of drainage and service pit lids shall be submitted and approved by Council prior to a Construction Certificate being issued for the relevant stage of work.</p>
	<p>Insert condition:</p> <p>B9B Public Domain Works – Modification 13</p> <p>The Public Domain Works shown in the Landscape Plans prepared by Urbis dated 22 September 2017 and referred to in Condition A3, and the Landscape Design Report prepared by Urbis dated 20 March 2018 and referred to in Condition A3 are to be completed prior to the issue of the Occupation Certification for the Ritz-Carlton tower.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
	<u>Reason:</u> It is proposed to insert B9B to reflect the public domain works proposed as part of Mod 13.
<p>B10 Traffic Management</p> <p>The proponent is to consult with Sydney Buses, the RTA and Council regarding additional necessary traffic management measures associated with the Pirrama Road vehicular drop off areas, including linemarking, signage, and a raised concrete median to prevent right turns into and out of the porte cochere. Details of the consultation and final design are to be provided to the Certifying Authority prior to the issue of a Construction Certificate for the Pirrama Road frontage works.</p>	No modification proposed as part of Modification 13.
<p>B10A Loading Dock Management Plan</p> <p>The Proponent shall update the Loading Dock Management Plan dated 2 March 2017 in consultation with the Sydney Coordination Office within Transport for NSW prior to a Construction Certificate being issued the level 3 Sovereign Room expansion. The plan will outline all management measures required to ensure the efficient and safe operation of the loading dock.</p>	<p>B10A Loading Dock Management Plan</p> <p>a) The Proponent shall update the Loading Dock Management Plan prepared by Mott MacDonald dated 2 March 2017 in consultation with the Sydney Coordination Office within Transport for NSW prior to a Construction Certificate being issued the level 3 Sovereign Room expansion. The plan will outline all management measures required to ensure the efficient and safe operation of the loading dock The Star Loading Dock (Jones Bay Road) and Darling Loading Dock (Edward Street).</p> <p>b) The Proponent shall update the Loading Dock Management Plan prepared by Change Logic Consulting dated 21 September 2017 in consultation with the Sydney Coordination Office within Transport for NSW prior to a Construction Certificate being issued the Ritz Carlton Hotel and Residential Tower. The plan will outline all management measures required to ensure the efficient and safe operation of The Star Event Loading Dock (Service Road).</p> <p><u>Reason:</u> to clarify references to Loading Dock Management Plans and related Loading Docks.</p>
<p>B10B Private Bus Transport</p> <p>The Proponent shall prepare a Private Bus Transport Management Plan (PBTMP) in consultation with Sydney Coordination Office within Transport for NSW and the City of Sydney prior to a Construction Certificate being issues for the Level 3 Sovereign Room expansion. The Plan shall ensure the bus services can operate in a safe and efficient manner.</p>	No modification proposed as part of Modification 13.
<p>B10C Porte Cochere Management</p> <p>The Proponent shall prepare a Porte Cochere Management Plan in consultation with Sydney Coordination Office within Transport for NSW and the City of Sydney prior to a Construction Certificate being issues for the Level 3 Sovereign Room expansion. The Plan shall ensure the operation of the porte cochere does not have a detrimental impact on the road network.</p>	<p>B10C Porte Cochere Management</p> <p>The Proponent shall prepare a consolidated Porte Cochere Management Plan in consultation with Sydney Coordination Office within Transport for NSW and the City of Sydney prior to a Construction Certificate being issued for the Level 3 Sovereign Room expansion and Ritz Carlton Hotel and Residential Tower. The Plan shall ensure the operation of the Jones Bay</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
	<p>Road porte-cochere and the Pirrama Road Ritz Carlton Porte-cochere does not have a detrimental impact on the road network.</p> <p><u>Reason:</u> To account for the management of all pedestrian loading areas.</p>
<p>B11 Sydney Water</p> <p>(1) An application is to be submitted to Sydney Water for the discharge of trade waste into the sewerage system.</p> <p>(2) Any proposed discharge to the wastewater system from the proposed Membrane Bioreactor and Reverse Osmosis Unit will be required to meet the acceptance standards as specified in Sydney Water's Trade Waste Policy and Management Plan.</p> <p>(3) The appropriate level of backflow prevention containment on the drinking water services and fire services supplying the property is required to be installed.</p> <p>(4) The design of the proposed diversion of stormwater to a stormwater harvesting tank on the Star City Hotel site is to be independently checked, prior to issue of the Construction Certificate, verifying that no significant flow diversions will occur to the detriment of the capacity of any part of the Edward Street stormwater drainage system.</p> <p>(5) The development is to implement best practice urban stormwater management using Water Sensitive Urban Design including:</p> <p>(a) Treat stormwater runoff to NSW EPA draft practice treatment objectives:</p> <ul style="list-style-type: none"> (i) 80% reduction in Total Suspended Solids (ii) 45% reduction in Total Phosphorus (iii) 45% reduction in Total Nitrogen <p>(b) Maximise stormwater reuse through integrated water cycle management, which can reduce potable water demand and assist in achieving the above pollutant load reduction objectives.</p> <p>(6) A Notice of Requirements is to be obtained from Sydney Water prior to the issue of any Construction Certificate for any new useable floor area. Plans and details demonstrating compliance with B11(1) - (6) are to be submitted to the Certifying Authority prior to issue of a Construction Certificate.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>B12 Developer Contributions</p>	
<p><i>B12A Development Contributions – Modification 14</i></p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)						Proposed Modifications to Conditions of Consent for Mod 13					
<p>A contribution under section 94 of the <i>Environmental Planning and Assessment Act 1979</i> must be paid in accordance with the following:</p> <p>Cash contribution</p> <ol style="list-style-type: none"> 1. In accordance with the adopted "City of Sydney Development Contributions Plan 2015" a cash contribution must be paid to Council in accordance with this condition. 2. The amount of the contribution is \$179,286.18 											
Level	Use	Contribution Use	Additional GFA	Gross Floor Area (m ²) per worker	Payable – based on \$1,777 workers contribution rate						
Level 00	Astral Luxury Retail Zone	Shops – including neighbourhood shops, excluding supermarkets	284 sqm	57	\$8,853.82						
Level 00	Change of use – Hotel to Retail	Shops – including neighbourhood shops, excluding supermarkets	145 sqm	57	\$4,520.44						
Level 00	Change of use – Hotel to F&B	Food & Drink Premises – restaurants, cafes & take away premises	128 sqm	21	\$10,831.24						
Level 01	Area of slab infill	Entertainment facility	214 sqm	130	\$2,925.22						

MP08_0098 Conditions of Approval (including Mod 14)						Proposed Modifications to Conditions of Consent for Mod 13
Level 03	Area of additional Premium Gaming	Entertainment Facility	4266 sqm	130	\$58,312.94	
Level 03	Event Centre Pre-Function	Function Centre	765sqm	119	\$11,423.57	
Level 03	Restaurant	Food & Drink Premises – restaurants, cafes & take away premises	974 sqm	21	\$82,418.95	
				Total	\$179,286.18	
<p>Timing of Payment</p> <p>1. The contribution must be paid prior to the issue of the Construction Certificate for the level 3 Sovereign Room Expansion, to the City of Sydney Council. Personal or company cheques will not be accepted.</p> <p>Indexing</p> <p>2. If the contribution rate is adjusted between the date on which Modification 14 is approved and payment of the contribution, then the figure in paragraph 2 of this condition will be indexed and calculated according to the then current contribution rate.</p>						
						<p><i>Insert below condition:</i></p> <p><i>B12B Development Contributions – Modification 13</i></p> <p>A contribution under section 7.11 of the <i>Environmental Planning and Assessment Act 1979</i> must be paid in accordance with the following:</p> <p>Cash contribution</p> <p>1. In accordance with the adopted "City of Sydney Development Contributions Plan 2015" a cash contribution must be paid to Council in accordance with</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13																																			
	<p>this condition.</p> <p>2. The amount of the contribution is \$5,667,711.43</p> <table><tr><th>Contribution Use</th><th>Additional GFA/Hotel Rooms/ Apartments</th><th>GFA(m²) Per worker/visitor</th><th>Contribution Rate</th><th>Mod 13 Contribution (\$)</th></tr><tr><td>Hotel Rooms</td><td>1-2 bed/key: + 187 rooms 3 or 3+ bed/key: +33 rooms</td><td>1 or 2 bed/key: 1.3 visitor/key 3 or 3+ bed/key: 0.8 visitor/key 0.4 worker/key</td><td>\$7,355per visitor \$1,864per worker</td><td>\$2,146,204.50</td></tr><tr><td>Apartments</td><td>1 bed – 81 apartments 2 bed – 104 apartments 3 bed – 19 apartments</td><td>-</td><td>1 bed - \$12,664per unit 2 bed - \$18,509per unit 3 bed - \$20,000 per unit</td><td>\$3,330,720</td></tr><tr><td>Food & Drink</td><td>+1,597</td><td>21m² per worker</td><td>\$1,864per worker</td><td>\$141,752.76</td></tr><tr><td>Function Centre</td><td>+781m²</td><td>119m² per worker</td><td>\$1,864per worker</td><td>\$12,233.48</td></tr><tr><td>Business Premises</td><td>+691m²</td><td>35m² per worker</td><td>\$1,864per worker</td><td>\$37,800.69</td></tr><tr><td></td><td></td><td></td><td>Total</td><td>\$5,667,711.43</td></tr></table> <p>Timing of Payment</p> <p>3. The contribution must be paid prior to the issue of the Construction Certificate for the Ritz Carlton Hotel and Residential Tower, to the City of Sydney Council. Personal or company cheques will not be accepted.</p> <p>Indexing</p> <p>4. If the contribution rate is adjusted between the date on which Modification 13 is approved and payment of the contribution, then the figure in paragraph 2 of this condition will be indexed and calculated according to the then current contribution rate.</p> <p><u>Reason:</u> to provide the required contribution under Section 7.11 of the Environmental Planning and Assessment Act 1979.</p>	Contribution Use	Additional GFA/Hotel Rooms/ Apartments	GFA(m²) Per worker/visitor	Contribution Rate	Mod 13 Contribution (\$)	Hotel Rooms	1-2 bed/key: + 187 rooms 3 or 3+ bed/key: +33 rooms	1 or 2 bed/key: 1.3 visitor/key 3 or 3+ bed/key: 0.8 visitor/key 0.4 worker/key	\$7,355per visitor \$1,864per worker	\$2,146,204.50	Apartments	1 bed – 81 apartments 2 bed – 104 apartments 3 bed – 19 apartments	-	1 bed - \$12,664per unit 2 bed - \$18,509per unit 3 bed - \$20,000 per unit	\$3,330,720	Food & Drink	+1,597	21m² per worker	\$1,864per worker	\$141,752.76	Function Centre	+781m²	119m² per worker	\$1,864per worker	\$12,233.48	Business Premises	+691m²	35m² per worker	\$1,864per worker	\$37,800.69				Total	\$5,667,711.43
Contribution Use	Additional GFA/Hotel Rooms/ Apartments	GFA(m²) Per worker/visitor	Contribution Rate	Mod 13 Contribution (\$)																																
Hotel Rooms	1-2 bed/key: + 187 rooms 3 or 3+ bed/key: +33 rooms	1 or 2 bed/key: 1.3 visitor/key 3 or 3+ bed/key: 0.8 visitor/key 0.4 worker/key	\$7,355per visitor \$1,864per worker	\$2,146,204.50																																
Apartments	1 bed – 81 apartments 2 bed – 104 apartments 3 bed – 19 apartments	-	1 bed - \$12,664per unit 2 bed - \$18,509per unit 3 bed - \$20,000 per unit	\$3,330,720																																
Food & Drink	+1,597	21m² per worker	\$1,864per worker	\$141,752.76																																
Function Centre	+781m²	119m² per worker	\$1,864per worker	\$12,233.48																																
Business Premises	+691m²	35m² per worker	\$1,864per worker	\$37,800.69																																
			Total	\$5,667,711.43																																
B13 Affordable Housing Contributions																																				
<p>B13A Affordable Housing Contributions – Modification 14</p> <p>The following Affordable Housing Contribution is payable in relation to Modification 14 as follows:</p>	<p>No modification proposed as part of Modification 13.</p>																																			

MP08_0098 Conditions of Approval (including Mod 14)					Proposed Modifications to Conditions of Consent for Mod 13
Level	Use	Contribution Use	Additional GFA	Payables – based on \$42.24 contribution rate	
Level 00	Astral Luxury Retail Zone & Astral Hotel Lobby	Commercial	542 sqm	\$22,894.08	
Level 01	Area of Slab infill	Commercial	214 sqm	\$9,039.36	
Level 03	Sovereign Gaming, Restaurant & Pre- function Space	Commercial	6,005 sqm	\$253,651.20	
Level 05	Astral Residences Lobby & Astral VIP Lounge Lobby	Commercial	61 sqm	2,576.64	
Total				\$288,161.28	
<ol style="list-style-type: none"> The above contribution is to be paid as follows: <ol style="list-style-type: none"> Prior to the first Construction Certificate being issued for the Modification 14 works, the Proponent must provide evidence to Council that a monetary contribution towards the provision of affordable housing has been paid. The contribution is \$288,161.28 based on 6,822 sqm of additional proposed 'commercial' gross floor area; or alternatively Prior to the first Construction Certificate for the Modification 14 works being issued, the Proponent must provide evidence that a bank guarantee in amount of \$288,161.28 (based on 6,822 sqm of additional proposed 'commercial' gross floor area) has been lodged with the Department of Planning and Environment Bank cheques to the value of the required contribution are to be made in favour of City West Housing Pty Ltd and paid to NSW Department of Planning and Environment. Certification of the Affordable Housing Contribution calculations including verification of total area, prepared by a Quantity Surveyor, and indexation of the contribution in accordance with the Affordable Housing Program, must be submitted to and approved by Council, prior to a Construction Certificate being issued for Modification 14 works being issued (where the contribution is being paid rather than a bank guarantee being lodged). If the Construction Certificate is to be issued by a Private Certifying Authority, they must seek Council's endorsement of the calculation (in the event the contribution is to be paid rather than a Bank Guarantee lodged) prior to issue of the Construction Certificate for Modification 14 works. In the event the Proponent elects to satisfy this condition with the lodgement of a Bank Guarantee the Proponent must pay the contribution calculated in accordance with (3) above prior to issue of an Occupation Certificate for the Level 3 Sovereign Room Expansion works. The Proponent must provide evidence to Council that the Affordable Housing contribution has been paid prior to the issue of the Occupation Certificate for the Level 3 Sovereign Room Expansion works. 					

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13												
6. The Bank Guarantee is to be paid and refunded in accordance with the requirements of the Revised City West Affordable Housing Program (June 2010) prepared by NSW Planning.	<p>B13B Affordable Housing Contributions – Modification 13</p> <p>The following Affordable Housing Contribution is payable in relation to Modification 13 as follows:</p> <table><tr><td>Contribution Use</td><td>Additional Mod 13 GFA</td><td>Payable Contribution for Mod 13 (\$43.18/m² for commercial & \$30.06/m² for residential)</td></tr><tr><td>Commercial</td><td>24,215m²</td><td>\$1,118,434.11</td></tr><tr><td>Residential</td><td>23,530m²</td><td>\$738,262.86</td></tr><tr><td></td><td>Total</td><td>\$1,856,696.97</td></tr></table> <p>1. The above contribution it to be paid as follows:</p> <p>a. Prior to the first Construction Certificate being issued for the Modification 13 works, the Proponent must provide evidence to Council that a monetary contribution towards the provision of affordable housing has been paid. The contribution is \$1,856,696.97 based on 25,139 sqm of additional proposed 'commercial' gross floor area and 23,838 sqm of additional proposed 'residential' gross floor area; or alternatively</p> <p>b. Prior to the first Construction Certificate for the Modification 13 works being issued, the Proponent must provide evidence that a bank guarantee in amount of \$1,856,696.97 (based on 25,139sqm of additional proposed 'commercial' gross floor area and 23,838sqm of additional proposed 'residential' gross floor area) has been lodged with the Department of Planning and Environment</p> <p>2. Bank cheques to the value of the required contribution are to be made in favour of City West Housing Pty Ltd and paid to NSW Department of Planning and Environment.</p> <p>3. Certification of the Affordable Housing Contribution calculations including verification of total area, prepared by a Quantity Surveyor, and indexation of the contribution in accordance with the Affordable Housing Program, must be submitted to and approved by Council, prior to a Construction Certificate being issued for Modification 13 works being issued (where the contribution is being paid rather than a bank guarantee being lodged).</p> <p>4. If the Construction Certificate is to be issued by a Private Certifying Authority, they</p>	Contribution Use	Additional Mod 13 GFA	Payable Contribution for Mod 13 (\$43.18/m ² for commercial & \$30.06/m ² for residential)	Commercial	24,215m ²	\$1,118,434.11	Residential	23,530m ²	\$738,262.86		Total	\$1,856,696.97
Contribution Use	Additional Mod 13 GFA	Payable Contribution for Mod 13 (\$43.18/m ² for commercial & \$30.06/m ² for residential)											
Commercial	24,215m ²	\$1,118,434.11											
Residential	23,530m ²	\$738,262.86											
	Total	\$1,856,696.97											

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
	<p>must seek Council's endorsement of the calculation (in the event the contribution is to be paid rather than a Bank Guarantee lodged) prior to issue of the Construction Certificate for Modification 13 works.</p> <p>5. In the event the Proponent elects to satisfy this condition with the lodgement of a Bank Guarantee the Proponent must pay the contribution calculated in accordance with (3) above prior to issue of an Occupation Certificate for the Ritz Carlton Hotel and Residential Hotel. The Proponent must provide evidence to Council that the Affordable Housing contribution has been paid prior to the issue of the Occupation Certificate for the Ritz Carlton Hotel and Residential Hotel.</p> <p>6. The Bank Guarantee is to be paid and refunded in accordance with the requirements of the Revised City West Affordable Housing Program (June 2010) prepared by NSW Planning.</p> <p><u>Reason:</u> to provide the required contribution for Affordable Housing as adjusted by date.</p>
<p>B14 Structural Details</p> <p>Prior to issue of a Construction Certificate, the Proponent shall submit to the satisfaction of the Certifying Authority, structural drawings prepared and signed by a suitably qualified practising Structural Engineer that complies with:</p> <ul style="list-style-type: none"> (1) the relevant clauses of the BCA, (2) the relevant development consent, (3) drawings and specifications comprising the Construction Certificate, and (4) the relevant Australian Standards listed in the BCA (Specification A1.3). 	<p>No modification proposed as part of Modification 13.</p>
<p>B15 Disabled Access</p> <p>Access and facilities for people with disabilities shall be provided in accordance with Part D3 of the BCA's Access Policy. Prior to the issue of a Construction Certificate a certification of compliance with this condition from an appropriately qualified person shall be provided to the Certifying Authority.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>B16 Mechanical Ventilation</p> <p>All mechanical ventilation systems shall be designed in accordance with Part F4.5 of the Building Code of Australia and shall comply with Australian Standards AS1668.2 and AS3666 Microbial Control of Air Handling and Water Systems of Building, to ensure adequate levels of health and amenity to the occupants of the building and to ensure environment protection.</p> <p>Details shall be submitted to the satisfaction of the Certifying Authority prior to the issue of a Construction Certificate.</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
The required operation and performance of any mechanical ventilation, air pressurisation or other smoke control system must not be impaired by the proposed partitioning layout.	
B17 Consolidation of Allotments Deleted.	
B18 Outdoor Lighting All outdoor lighting shall comply with, where relevant, AS/NZ1158.3: 1999 Pedestrian Area (Category P) Lighting and AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting. Details demonstrating compliance with these requirements are to be submitted to the satisfaction of the Certifying Authority prior to the issue of a Construction Certificate.	B18 Outdoor Lighting All outdoor lighting shall comply with, where relevant, AS/NZ1158.3: 1999 Pedestrian Area (Category P) Lighting AS 1158.3.1-2005 Lighting for Road and Public Spaces Pedestrian Areas and AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting. Details demonstrating compliance with these requirements are to be submitted to the satisfaction of the Certifying Authority prior to the issue of a Construction Certificate. <u>Reason:</u> Updating the Australian Standard to the most up to date.
B19 Construction and Traffic Management Plan Prior to the issue of a Construction Certificate the Proponent must update the Construction Pedestrian and Traffic Management (CPTMP) in consultation with the Sydney Coordination Office within Transport for NSW and submit it to the Principal Certifying Authority. The construction hours however must be in accordance with condition D11 of this approval. The Proponent shall also submit a copy of the final plan to the Department and the Council.	B19 Construction and Traffic Management Plan Prior to the issue of a Construction Certificate the Proponent must update the Construction Pedestrian and Traffic Management (CPTMP) in consultation with the Sydney Coordination Office within Transport for NSW and submit it to the Principal Certifying Authority. The construction hours however must be in accordance with condition D11 of this approval. The Proponent shall also submit a copy of the final plan to the Department and the Council.
	B19A Construction and Traffic Management Plan Prior to the issue of a Construction Certificate for the Ritz-Carlton Tower, the proponent must update the Construction Pedestrian and Traffic Management (CPTMP) in consultation with the Sydney Coordination Office within Transport for NSW and submit to the satisfaction of the Principal Certifying Authority. The construction hours however must be in accordance with condition D11 of this approval. The Proponent shall also submit a copy of the final plan to the Department and the Council. <u>Reason:</u> to provide clarity on the intended construction management programme.
B20 Compliance with BCA Evidence demonstrating that the Proposal complies with the BCA is to be provided to the satisfaction of the Certifying Authority prior to the issue of a construction certificate.	No modification proposed as part of Modification 13.
B21 Construction Noise and Vibration Management Plan A Construction Noise and Vibration Management Plan (CNVMP) is to be prepared detailing: (1) specific activities to be carried out on the site and associated noise sources;	No modification proposed as part of Modification 13.

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<ul style="list-style-type: none"> (2) identification of potentially affected sensitive receivers; (3) construction noise and vibration criteria specified in the conditions of this approval; (4) maximum noise levels for internal works to be carried out 24 hours a day; (5) detailed assessment of the construction methods to be used for the works; (6) mitigation treatments, management methods and procedures to be implemented during construction to control noise and vibration; (7) measures to inform all potentially impacted residents of the nature of the works to be carried out, the expected noise levels and duration, as well as site contact details; (8) noise and vibration monitoring, reporting and response procedures; (9) measures to be implemented to manage complaint handling and reporting; and (10) contingency plans to be implemented where non-compliances occur or noise complaints are received. <p>The CNVMP must be prepared in accordance with the Interim Construction Noise Guideline and include feasible and reasonable work practices to meet the established construction noise limits.</p> <p>The construction hours must be in accordance with condition D11 of this approval.</p> <p>The CNVMP is to be submitted to the Certifying Authority for endorsement prior to the issue of a Construction Certificate. The Proponent shall also submit a copy of the final plan to the Department and the Council.</p>	
<p>B21A Construction Environmental Management Plan</p> <p>The Proponent shall prepare a Construction Environmental Management Plan (CEMP) prior to the issue of a Construction Certificate for the Level 3 Sovereign Room expansion in consultation with the Department of Primary Industries (DPI Water).</p>	No modification proposed as part of Modification 13.
<p>B22 Environmental Protection - Water and Sediment Control</p> <p>A Water and Sediment Control Plan shall be prepared, consistent with the principles and practices set out in Managing Urban Stormwater-Soils & Construction Volume 1 (2004) by Landcom and must include:</p> <ul style="list-style-type: none"> (1) The procedures by which stormwater and waste water deposited or generated on site is to be collected and treated prior to discharge including details of any proposed pollution control device; 	No modification proposed as part of Modification 13.

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>(2) The procedures to be adopted for the prevention of run-off from the site onto the public way; and</p> <p>(3) The procedures to be adopted for the prevention of loose material and litter from being blown onto the public way.</p> <p>During the works:</p> <p>(4) Erosion and sediment controls must be regularly inspected, repaired and maintained in working order sufficient for a 10 year Average Recurrence Interval (ARI) rainfall event;</p> <p>(5) Erosion and sediment control signage available from the relevant Authority must be completed and attached to the most prominent structure visible at all times when entering the site for the duration of demolition; and</p> <p>(6) Demolition operations and stockpiles must not be located on the public footway or any other locations which could lead to the discharge of materials into the stormwater system.</p> <p>The Water and Sediment Control Plan is to be submitted to the Certifying Authority prior to the issue of the first Construction Certificate.</p>	
<p>B23 Protection of Trees During Construction</p> <p>(1) All trees to be retained on and adjacent to the site must be protected at all times during excavation and construction. Details of the methods of protection must be submitted to and approved by the Certifying Authority prior to the issue of the first Construction Certificate. All approved protection measures must be maintained for the duration of works and any tree on the footpath which is damaged or removed during excavation or construction must be replaced.</p> <p>(2) Where trees are required to be removed during construction those trees are to be replaced by a tree of similar species and size in accordance with the approved landscape concept prior to issue of an Occupation Certificate for the Level 3 Sovereign Room expansion (excluding the Sovereign Room Swing Space).</p>	<p>B23 Protection of Trees During Construction</p> <p>(1) All trees to be retained on and adjacent to the site must be protected at all times during excavation and construction. Details of the methods of protection must be submitted to and approved by the Certifying Authority prior to the issue of the first Construction Certificate. All approved protection measures must be maintained for the duration of works and any tree on the footpath which is damaged or removed during excavation or construction must be replaced.</p> <p>(2) Where trees are required to be removed during construction of Mod 14 those trees are to be replaced by a tree of similar species and size in accordance with the approved landscape concept prior to issue of an Occupation Certificate for the Level 3 Sovereign Room expansion (excluding the Sovereign Room Swing Space)</p> <p>(3) Where trees are required to be removed during construction of Mod 13 those trees are to be replaced by a tree of similar species and size in accordance with the approved landscape concept prior to issue of an Occupation Certificate for the Ritz Carlton Hotel and Residential Tower.</p> <p><u>Reason:</u> to maintain streetscape amenity.</p>
<p>B24 Security Management Plan</p> <p>Prior to issue of a Construction Certificate, a Security Management Plan specifying security patrol, surveillance and other security and response methods and security management of the</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)			Proposed Modifications to Conditions of Consent for Mod 13														
public and private domain within and surrounding the site must be submitted to Council for approval. The approved plan must be implemented at all times during operation of the use.																	
B25 Construction Waste Management Plan Prior to the issue of a Construction Certificate, a Waste Management Plan shall be prepared by a suitably qualified person. The Proponent shall submit a copy of the plan to the Department and Council.			No modification proposed as part of Modification 13.														
B26 Footpath Damage Bank Guarantee Prior to a Construction Certificate being issued the owner of the site must provide a bank guarantee for the sum to be determined based on the City of Sydney's Schedule of Fees and Charges as security for rectification of any damage to the public way. Note: The bank guarantee required by this condition does not need to be provided if a separate bank guarantee is lodged as part of an approval for a hoarding over the public way. However, neither bank guarantee will be released until all development works are complete to the satisfaction of Council, including rectification of damage to the public way. You should contact Council to determine the bank guarantee amount prior to payment.			No modification proposed as part of Modification 13.														
B27 Design of Service Link Prior to the issue of a Construction Certificate, the Proponent shall submit to the satisfaction of the Director-General, design details demonstrating the transparency of the service link is maximised as per the recommendations of the Visual Impact Assessment, Multi Use Entertainment Facility - Star City Casino, prepared by GMU Urban Design and Architecture, dated October 2010.			No modification proposed as part of Modification 13.														
B28 Emergency Evacuation Prior to the issue of a Construction Certificate for the Multi Use Entertainment Facility works the Director-General must be satisfied that there is a provision for the safe evacuation of the Multi-Use Entertainment Facility (MUEF) in the case of an emergency			No modification proposed as part of Modification 13.														
B29 Bicycle Parking and End of Trip Facilities The minimum number of bicycle parking spaces and end of trip facilities to be provided for the development must comply with the table below and the approved plans:			B29 Bicycle Parking and End of Trip Facilities for Modification 13 The minimum number of bicycle parking spaces and end of trip facilities to be provided for the development Modification 13 must comply with the table below and the approved plans:														
<table><tr><td>User</td><td>Quantity</td><td>Requirements</td></tr><tr><td></td><td></td><td></td></tr></table>			User	Quantity	Requirements				<table><tr><td>User</td><td>Quantity</td><td>Requirements</td></tr><tr><td></td><td></td><td></td></tr></table>			User	Quantity	Requirements			
User	Quantity	Requirements															
User	Quantity	Requirements															

MP08_0098 Conditions of Approval (including Mod 14)				Proposed Modifications to Conditions of Consent for Mod 13			
	Visitor Parking	29	<ul style="list-style-type: none">Levels B1 and B2 as shown on plan Nos. A90B1 and A90B2;On-grade;In a visible and easily accessible location		Visitor Parking	29 62	<ul style="list-style-type: none">Levels B1 and B2 as shown on plan Nos. A90B1 and A90B2 for Mod 14;20 rental bikes in the Pirrama Road forecourt;13 bike lockers adjacent to the Light Rail platform in an 32sqm SELG retail space;29 bike racks located in groups at the major entry points of the site;On-grade; andIn a visible and easily accessible location.
	Staff Parking	5			Staff Parking	5 35	Class 1 spaces for employees. Employee parking is a 66sqm secure room at the Union Street and Edward Street entry to the food court and Casino escalators.
	End of trip change facilities including showers and change area	Separate male and female facilities at Heart of House on Level 00			End of trip change facilities including showers and change area	Separate male and female facilities at Heart of House on Level 00	
<p>The layout, design and security of bicycle facilities must comply with <i>Australian Standard AS 2890.3:2015 Parking Facilities Part 3: Bicycle Parking Facilities</i>. The details must be submitted to and approved by the Principle Certifying Authority confirming prior to the Construction Certificate being issued.</p>				<p>The layout, design and security of bicycle facilities must comply with <i>Australian Standard AS 2890.3:2015 Parking Facilities Part 3: Bicycle Parking Facilities</i>. The details must be submitted to and approved by the Principle Certifying Authority confirming prior to the Construction Certificate being issued.</p> <p><u>Reason:</u> to account for amendments to car and bicycle car parking.</p>			
<p>B30 Landscaped (Green) Roofs</p> <p>(a) A detailed plan of the green roof, drawn to scale, by a qualified landscape architect or landscape designer, must be submitted to and approved by Council's Area Planning Manager prior to the issue of a Construction Certificate for the Level 3 Sovereign Room Expansion. The plan must include:</p> <p>(i) Location of existing and proposed structures, services and hard landscaping on the rooftop, roof fixings and other structural elements</p>				<p>B30 Landscaped (Green) Roofs</p> <p>(a) A detailed plan of the green roof, drawn to scale, by a qualified landscape architect or landscape designer, must be submitted to and approved by Council's Area Planning Manager prior to the issue of a Construction Certificate for the Level 3 Sovereign Room Expansion. The plan must include:</p> <p>(i) Location of existing and proposed structures, services and hard landscaping on the rooftop, roof fixings and other structural elements that may interrupt waterproofing, including cross-sectional details of all</p>			

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>that may interrupt waterproofing, including cross-sectional details of all components.</p> <p>(ii) Details of earthworks including mounding and retaining walls.</p> <p>(iii) Details of the location, sizes and numbers of plants used with reference to NATSPEC, with a preference for locally indigenous and drought resistant plants. The proposed green roof plant species are not approved, and must be selected in consultation with the City's ecologist to ensure adequate biodiversity.</p> <p>(iv) Details of the soil media/substrate type and depth.</p> <p>(v) Details of installation methodology e.g. safety considerations for working at height, location of maintenance hooks (if applicable) transport materialsetc.</p> <p>(vi) Details of accessible and inaccessible areas on the Green Roof. Where proposed to be inaccessible, Green Roofs are required to remain such during occupation of the property.</p> <p>(vii) Details of drainage and irrigation systems, including overflow provisionsand water retention cells in the drainage layer (if applicable).</p> <p>(b) Prior to the issue of a Construction Certificate for the Level 3 Sovereign Room Expansion, the following details are to be submitted to and approved by the Principal Certifying Authority:</p> <p>(i) Evidence the green roof has been assessed as part of the structural certification provided for the development; and</p> <p>(ii) Evidence the green roof has been assessed as part of the waterproofing certification provided for the development.</p> <p>(c) All landscaping in the approved plan is to be completed prior to the issue of an Occupation Certificate for the Level 3 Sovereign Room Expansion.</p> <p>(d) Prior to the issue of an Occupation Certificate for the Level 3 Sovereign Room Expansion, a maintenance plan is to be submitted and approved by</p>	<p>components.</p> <p>(ii) Details of earthworks including mounding and retaining walls.</p> <p>(iii) Details of the location, sizes and numbers of plants used with reference to NATSPEC, with a preference for locally indigenous and drought resistant plants. The proposed green roof plant species are not approved, and must be selected in consultation with the City's ecologist to ensure adequate biodiversity.</p> <p>(iv) Details of the soil media/substrate type and depth.</p> <p>(v) Details of installation methodology e.g. safety considerations for working at height, location of maintenance hooks (if applicable) transport materialsetc.</p> <p>(vi) Details of accessible and inaccessible areas on the Green Roof. Where proposed to be inaccessible, Green Roofs are required to remain such during occupation of the property.</p> <p>(vii) Details of drainage and irrigation systems, including overflow provisionsand water retention cells in the drainage layer (if applicable).</p> <p>(b) Prior to the issue of a Construction Certificate for the Level 3 Sovereign Room Expansion, the following details are to be submitted to and approved by the Principal Certifying Authority:</p> <p>(i) Evidence the green roof has been assessed as part of the structural certification provided for the development; and</p> <p>(ii) Evidence the green roof has been assessed as part of the waterproofing certification provided for the development.</p> <p>(c) All landscaping in the approved plan is to be completed prior to the issue of an Occupation Certificate for the Level 3 Sovereign Room Expansion.</p> <p>(d) Prior to the issue of an Occupation Certificate for the Level 3 Sovereign Room Expansion, a maintenance plan is to be submitted and approved by the Principal Certifying Authority. A copy of the maintenance plan is to be kept on site at all times during construction and shall be produced to Council on request following completion. The Maintenance Manual shall include as a minimum:</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>the Principal Certifying Authority. A copy of the maintenance plan is to be kept on site at all times during construction and shall be produced to Council on request following completion. The Maintenance Manual shall include as a minimum:</p> <p>(i) Frequency and methodology of different maintenance requirements including the removal of green waste.</p> <p>(ii) Details of safety procedures.</p> <p>(iii) Laminated copies of 'As Built' drawings.</p> <p>(iv) Manufacturer's contact details and copies of manufacturers' typical details and specification;</p> <p>(v) Copies of warranties and guarantees relating to all materials and plant used in construction; and</p> <p>(vi) Decommissioning procedures.</p> <p>(e) Inaccessible green roofs are required to remain inaccessible during occupation of the property.</p>	<p>(i) Frequency and methodology of different maintenance requirements including the removal of green waste.</p> <p>(ii) Details of safety procedures.</p> <p>(iii) Laminated copies of 'As Built' drawings.</p> <p>(iv) Manufacturer's contact details and copies of manufacturers' typical details and specification;</p> <p>(v) Copies of warranties and guarantees relating to all materials and plant used in construction; and</p> <p>(vi) Decommissioning procedures.</p> <p>(e) Inaccessible green roofs are required to remain inaccessible during occupation of the property.</p> <p>(f) Notwithstanding (a) to (e) above, in the event that construction of Modification 13 works has commenced, which prevents the undertaking of the landscaped green roof works, the landscaped green roof will be superseded by the Level 5 terrace works shown in the Architectural Plans prepared by FJMT, dated 1 September 2017 referenced in condition A2 of this approval.</p> <p><u>Reason:</u> to account for the staging of construction.</p>
PART C - PRIOR TO COMMENCEMENT OF WORKS	
<p>C1 Barricade Permit</p> <p>Where construction/building works require the use of a public place including a road or footpath, approval for a Permit is to be obtained from Council prior to the commencement of work. Details of the barricade construction, area of enclosure and period of work are to be in accordance with Council's requirements.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>C2 Vehicle Cleansing</p> <p>Prior to the commencement of work, suitable measures are to be implemented to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the site/associated with the construction of the development. It is an offence to allow, permit or cause materials to pollute or be placed in a position from which they may pollute waters.</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>C3 Utility Services</p> <p>Prior to commencement of work, to ensure that utility authorities are advised of the development:</p> <p>(1) A survey is to be carried out of all utility services within and adjacent to the site including relevant information from utility authorities and excavation if necessary, to determine the position and level of services.</p> <p>(2) The Proponent is to negotiate with the utility authorities (eg. Energy Australia, Sydney Water Corporation and Telecommunications Carriers) in connection with the relocation and/or adjustment of the services affected by the construction of the underground structure. Any costs in the relocation, adjustment or support of services are to be the responsibility of the developer.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>C4 Design Standard</p> <p>Car park areas are to comply with the relevant Australian Standard and on-site manoeuvrability is to comply with AUSTROADS.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>C5 Hoarding</p> <p>Any B-Class hoarding erected around the site is to contain graphics (not 3rd party advertising) which activates the public domain and may include some images of the new building.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>C6 Contact Telephone Number</p> <p>Prior to the commencement of the works, the Proponent shall forward to the Department and Council a 24-hour telephone number to be operated for the duration of the construction works.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>In Part D – During construction works</p>	
<p>D1 Loading and Unloading During Construction</p> <p>A Works Zone is required if loading and unloading is not possible on site. If a Works Zone is warranted an application must be made to Council prior to commencement of the work on the site. An approval for a Works Zone may be given for a specific period and certain hours of the day to meet the particular need for the site for such facilities at various stages of construction. The approval will be reviewed periodically for any adjustment necessitated by the progress of the construction activities.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>D2 No Obstruction of Public Way</p> <p>The public way must not be obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances. Non-compliance with this requirement will result in the issue of a notice by Council to stop all work on site.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>D3 Covering of Loads</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
All vehicles involved in the excavation process and departing with spoil or loose matter, must have their loads fully covered before entering the public roadway.	
<p>D4 Erosion and Sedimentation Control</p> <p>Sediment controls, to ensure that no sediment, fines, and like material can enter the waterway or drainage system are to be in place for the duration of the works. The applicant is to carry out works generally in accordance with the Construction Management Plan in respect to environmental management and safeguards. These controls are to be maintained at design level throughout the duration of the works and are to be inspected for this purpose at frequent intervals. Any deficiencies are to be immediately made good. Soil erosion and sediment control measures and methods shall be designed in accordance with the document Managing Urban Stormwater-Soils & Construction Volume 1 (2004) by Landcom. Details are to be complied with prior to Construction.</p>	No modification proposed as part of Modification 13.
<p>D5 Disposal of Seepage and Stormwater</p> <p>Any seepage or rainwater collected on-site during construction shall not be pumped to the street stormwater system unless separate prior approval is given in writing by Council.</p>	No modification proposed as part of Modification 13.
<p>D6 Stormwater Pits</p> <p>Any existing stormwater pits that do not comply with AS 3500 are to be upgraded as part of the development.</p>	No modification proposed as part of Modification 13.
<p>D7 Setting out Structures</p> <p>The new works shall be set out by a registered surveyor to verify the correct position of each in relation to property boundaries and the approved alignment levels.</p>	No modification proposed as part of Modification 13.
<p>D8 Approved Plans to be On-Site</p> <p>A copy of the approved and certified plans, specifications and documents incorporating conditions of approval shall be kept on the site at all times and shall be readily available for perusal by any officer of the Department or Council.</p>	No modification proposed as part of Modification 13.
<p>D9 Site Notice</p> <p>A site notice(s) shall be prominently displayed at the boundaries of the site for the purposes of informing the public of project details including, but not limited to the details of the PCA, Builder, the Architect and Structural Engineer. The notice(s) is to satisfy all but not be limited to, the following requirements:</p> <ul style="list-style-type: none"> (1) Minimum dimensions of the notice are to measure 841mm x 594mm (A1) with any text on the notice to be a minimum of 30 point type size; (2) The notice is to be durable and weatherproof and is to be displayed throughout the works period; (3) The approved hours of work, the name of the site/project manager, the responsible managing company (if any), its address and 24 hour contact phone 	No modification proposed as part of Modification 13.

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>number for any inquiries, including construction/noise complaint are to be displayed on the site notice; and</p> <p>(4) The notice(s) is to be mounted at eye level on the perimeter hoardings/fencing and is to state that unauthorised entry to the site is not permitted.</p>	
<p>D10 Dust Control Measures</p> <p>Adequate measures shall be taken to prevent dust from affecting the amenity of the immediate area during construction. In particular, the following measures must be adopted:</p> <ul style="list-style-type: none"> (1) Physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or activity from generating dust emissions, (2) All materials shall be stored or stockpiled at the best locations, (3) The surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs, (4) All vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust or other material, (5) All equipment wheels shall be washed before exiting the site, (6) Gates shall be closed between vehicle movements and shall be fitted with shade cloth, and (7) Cleaning of footpaths and roadways shall be carried out regularly. 	<p>No modification proposed as part of Modification 13.</p>
<p>D11 Hours of Work</p> <ul style="list-style-type: none"> 1. The hours of construction, including the delivery of materials to and from the site, shall be restricted as follows: <ul style="list-style-type: none"> a) between 7:00 am and 5:30pm, Mondays to Fridays inclusive; b) between 8:00 am and 3:00 pm, Saturdays; c) between 9:00 am and 3.30 pm, Mondays to Fridays for mechanical rock blasting; and d) no work on Sundays and public holidays. 2. Works may be undertaken outside these hours where: <ul style="list-style-type: none"> a) the delivery of materials is required outside these hours by the Police or other authorities; 	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>b) it is required in an emergency to avoid the loss of life, damage to property and/or to prevent environmental harm; and</p> <p>c) residents likely to be affected by the works are notified of the timing and duration of these works at least 48 hours prior to the commencement of the works; and</p> <p>d) the work is approved by the Director-General or his nominee.</p> <p>3. Notwithstanding conditions 1 and 2 above minor internal works to the existing building, including but not limited to demolition of light weight partitions, construction of new partitions, installation of ceilings, finishing of floors, engineering services installations, carpet installation, lighting programming, painting, may be undertaken outside these hours in accordance with the submitted Construction Noise and Vibration Management Plan required by condition B21.</p> <p>Should noise complaints be received by Council or other State government agencies from a place of different occupancy (including commercial premises) and the complaint being substantiated by a Council Officer or representative of the relevant State agency, the construction works occurring during the approved extended construction hours must cease operation until 'attenuation works' are carried out. Extended construction hours must not commence until compliance with the relevant noise conditions can be achieved.</p> <p>All heavy demolition and construction works shall be restricted to between the hours of 9:00am – 4:00pm Mondays to Saturdays.</p>	
<p>D12 Signage</p> <p>Adequate signage and other protective measures should be erected in the vicinity of the heritage items and in the vicinity of the work site to alert contractors and subcontractors to the existence and fragile nature of these heritage items.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>D13 Sydney Metro Authority</p> <p>Persons authorised by Sydney Metro Authority are to be granted access to inspect the site to enable them to assess whether excavation works and structures have been undertaken according to agreed plans.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>D14 Work on site to Cease</p> <p>If any unidentified historical archaeological remains or deposits are exposed during the works excavation is to cease immediately in the affected areas and the archaeologist is to undertake an evaluation of the potential extent and significance of such relics. The Heritage Council is to be notified in accordance with Section 146 of the NSW Heritage Act, 1977.</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>D15 Associated Roadway Costs</p> <p>All costs associated with the construction of any new road works including kerb and gutter, road pavement, drainage system and footway shall be borne by the developer. The new road works must be designed and constructed in accordance with the Council's 'Development Specification for Civil Works Design and Construction'.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>D16 Paving Materials</p> <p>The surface of any material used or proposed to be used for the paving of colonnades, thoroughfares, plazas, arcades and the like which are to be used by the public must comply with AS/NZS 4586:2004 (including amendments) "Slip resistance classification of new pedestrian surface materials"</p>	<p>No modification proposed as part of Modification 13.</p>
<p>D17 Public Domain Plan</p> <p>Three copies of a Public Domain Plan must be prepared by an architect, urban designer or landscape architect and must be lodged with Council's Public domain Section and approved by Council prior to a Road Opening Permit being issued for the works on the public way. It is recommended that draft plans should be submitted for comment prior to formal submission for approval.</p> <p>The Public Domain Plan must be prepared in accordance with Council's Public Domain Manual, Sydney Streets Design Code and must be undertaken in consultation in consultation with Council officers. The works to the public domain are to be completed in accordance with the approved plan and the Public Domain Manual before any Occupation Certificate is issued in respect of the Development or before the use commences, whichever is earlier and prior to the release of the Public Domain Works Deposit.</p> <p>The Public Domain Plan must address the following:</p> <ul style="list-style-type: none"> (i) Public domain works to Union Street and adjacent to Union Street must be compatible with the materials, finishes and details documented on Dwg. Nos 208008 LDCD 09 and 208008 LDCD 10 provided by Council (ii) Footways surrounding the site are to be asphalt or other paving treatment agreed by Council, designed and constructed in accordance with Council's Sydney Streets Design Code. (iii) Pedestrian kerb ramps must be designed and constructed at pedestrian crossing points in the footway in accordance with Council's Sydney Streets Design Code, and must be oriented to suit the path of travel (iv) New kerb works surrounding the sites are to be stone, designed and constructed in accordance with Council's Sydney Streets Design Code. Existing serviceable stone kerbstones are to be retained. Infill kerbstone types are to match existing. Gutters are to be concrete, constructed in accordance with Council's Sydney Streets Design Code. (v) All entry and exit driveways on the public way are to be designed and constructed in accordance with council's Sydney Streets Design Code, (including drop kerb), with finishes to be consistent with adjacent 	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>(vi) footway paving and kerb materials agreed by Council .The footway and driveway are to be at one continuous level, with no kerb return. Lighting on the public way must comply with the requirements of AS 1158.3.1 Category P1. Complying lighting designs, prepared by a practicing lighting engineer, must be submitted for approval by the Council prior to the issue of a Road Opening License for public domain works on the public way.</p>	
<p>D17A Public Domain Plan – Mod 14 Works</p> <p>Three copies of a Public Domain Plan must be prepared by an architect, urban designer or landscape architect reflecting the proposed Public Domain Works shown within the Landscape Report prepared by Urbis dated 16 February 2017 include the relevant provisions to address the requirements of condition B9A. The plan must be lodged with Council's Public Domain Section and approved by Council prior to the commencement of the public domain works.</p>	
<p>D18 Public Domain Damage Deposit</p> <p>A Public Domain Damage Deposit calculated on the basis of 135 lineal metres of asphalt site frontage must be lodged with Council in accordance with the City of Sydney's adopted Schedule of Fees and Charges. The Public Domain Damage Deposit must be submitted as an unconditional bank guarantee in favour of Council as security for repairing any damage to the public domain in the vicinity of the site.</p> <p>The guarantee must be lodged with Council prior to an approval for demolition being granted or a Construction Certificate being issued, whichever is earlier.</p> <p>The Bank Guarantee will be retained in full until the final Occupation Certificate has been issued and any rectification works to the footway and Public Domain are completed to Council's satisfaction. On satisfying the above requirements 90% of the total securities will be released, with the remaining 10% to be retained for the duration of the 12 months Defect Liability Period.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>D19 Road Opening License</p> <p>A separate Road Opening License must be obtained prior to the approved public domain works commencing on the public way.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>D20 Alignment Levels</p> <p>Cross sections and longitudinal sections demonstrating the existing and proposed gutter, kerb and footway levels and gradients for the site frontages must be prepared by a registered surveyor or qualified practising civil engineer, must be prepared in accordance with the Public Domain Manual and must be submitted to and approved by Council in conjunction with the</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
Public Domain Plan prior to issue of a Road Opening License for public domain works on the public way.	
<p>D21 Street Trees</p> <p>(i) 14 existing large Cabbage Tree Palms (<i>Livistona australis</i>) located on Council's footpath in the Pirrama Road frontage of the site must be removed intact, must be retained and maintained, and must be replanted in the Pirrama Road frontage of the site during construction of the public domain works in locations to be agreed with Council officers</p> <p>(ii) Where intact removal of palms in the footpath is difficult or not possible due to the site constraints, other palms of the same species and comparable height and health may be substituted as replacements on a 'one for one' basis. All such substitutes are subject to approval by Council's Arborist.</p> <p>(iii) It is noted that the Weeping Figs (<i>Ficus benjamina</i>) in Council's footpath differ from the species selected for replanting (<i>Livistona australis</i>). Any fig trees approved for removal, pending Council's nominal notification period and the issue of relevant permits, are to be replaced with Cabbage Tree palms during the public domain works. The height and vigour of all such substitutes are to match other palms to be replanted as closely as possible.</p> <p>(iv) The new locations for transplanted trees are to be agreed by Council, conforming to the Sydney Streets Design Code and Sydney Street Tree Master Plan where possible (refer to Council's Street Tree Master Plan for guidelines on spacing and appropriate placement of street trees).</p> <p>(v) All transplanting works are to conform to the work method detailed in the report 'Tree Transplanting Methodology Statement' dated August 2009, drafted by Dave Dooley. The proponent shall engage and retain a qualified arborist (AQF5) to undertake and complete all stages of the transplanting work in accordance with the approved transplanting plan.</p> <p>(vi) In the event that one or some of the trees for retention die (despite best practices conforming to the approved transplanting plan), the developer must replace the lost palms on a one for one basis, with the same species of a similar height and health, prior to the release of the public domain works deposit.</p> <p>(vii) All trees to be retained must be protected from mechanical damage due to hoardings erection or other construction activities. This protection includes the wrapping of trunks with several layers of hessian and fixed with tape or tie wire (not nailed or screwed) to and height that exceeds the eventual height of the hoardings; as well as judicious placement of the feet of the hoardings to keep them a minimum distance of 1 metre from any trunk. No excavation, demolition or other potentially negatively impactful activities are to be undertaken within 5 metres of any tree to be retained.</p>	<p>D21 Street Trees</p> <p>(i) 14 existing large Cabbage Tree Palms (<i>Livistona australis</i>) located on Council's footpath in the Pirrama Road frontage of the site must be removed intact, must be retained and maintained, and must be replanted in the Pirrama Road frontage of the site during construction of the public domain works in locations a suitable location (or locations) elsewhere to be agreed with Council officers.</p> <p><u>Reason:</u> These trees are the property of City of Sydney as such consultation will occur with Council to maintain the intent of this condition and allow for these trees to be planted elsewhere.</p> <p>(ii) Where intact removal of palms in the footpath is difficult or not possible due to the site constraints, other palms of the same species and comparable height and health may be substituted as replacements on a 'one for one' basis. All such substitutes are subject to approval by Council's Arborist.</p> <p>(v) It is noted that the Weeping Figs (<i>Ficus benjamina</i>) in Council's footpath differ from the species selected for replanting (<i>Livistona australis</i>). Any fig trees approved for removal, pending Council's nominal notification period and the issue of relevant permits, are to be replaced with Cabbage Tree palms during the public domain works. The height and vigour of all such substitutes are to match other palms to be replanted as closely as possible.</p> <p><u>Reason:</u> The proposed landscaping plan details the use of Street Trees in accordance with City of Sydney's Street Tree Masterplan.</p> <p>(iv) The new locations for transplanted trees are to be agreed by Council, conforming to the Sydney Streets Design Code and Sydney Street Tree Master Plan where possible (refer to Council's Street Tree Master Plan for guidelines on spacing and appropriate placement of street trees).</p> <p>(v) All transplanting works are to conform to the work method detailed in the report 'Tree Transplanting Methodology Statement' dated August 2009, drafted by Dave Dooley. The proponent shall engage and retain a qualified arborist (AQF5) to undertake and complete all stages of the transplanting work in accordance with the approved transplanting plan.</p> <p>(vi) In the event that one or some of the trees for retention die (despite best practices conforming to the approved transplanting plan), the developer must replace the lost palms on a one for one basis, with the same species of a similar height and health, prior to the release of the public domain works deposit.</p> <p>(vii) All trees to be retained must be protected from mechanical damage due to hoardings erection or other construction activities. This protection includes the wrapping of trunks with several layers of hessian and fixed with tape or tie wire (not nailed or screwed) to and height that exceeds the eventual height of the hoardings; as well as judicious placement of the feet of the hoardings to keep them a minimum distance of 1 metre from any trunk. No excavation, demolition or other potentially</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
	negatively impactful activities are to be undertaken within 5 metres of any tree to be retained.
<p>D22 RailCorp HV (11kV) Cable</p> <p>No works are to take place around the RailCorp HV (11kV) cable located along both Pirrama Road and Jones Bay Road without prior written approval from RailCorp.</p>	No modification proposed as part of Modification 13.
<p>D23 Water efficiency</p> <p>All water fixtures, including toilets, urinals, taps, showers and dishwashers are required to have a NABERS rating of 3 star or greater.</p>	No modification proposed as part of Modification 13.
<p>D24 Heritage</p> <p>(1) General Heritage</p> <p>(a) The proposed works are to be carried out in a manner that minimises demolition, alterations, new penetrations/fixings to the significant fabric of the SELS Building, which is listed as a Heritage Item.</p> <p>(b) The fabric and features of the SELS Building to be retained by the Proposal must be properly protected during the process of demolition and construction.</p> <p>(c) All conservation and adaption works are to be in accordance with the Articles of the Australia ICOMOS Burra Charter 1999.</p> <p>(d) Experienced tradespersons (as appropriate) are to be commissioned who are skilled in traditional building and engineering trades to carry out the proposed scope of works to the SELS Building</p> <p>(e) New services to the SELS Building are to be installed with minimum intervention to significant fabric and spaces.</p> <p>(f) Brickwork/stone must not be rendered, painted or coated.</p> <p>(2) Making Good to Existing Building All new internal and external finishes and works of making good to the SELS Building must match the existing original work adjacent in respect of materials used, detailed execution and finished appearance.</p>	No modification proposed as part of Modification 13.

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>(3) SELS Building Lighting The lighting to Pymont Street Façade of the SELS Building is to be installed in accordance with the Lighting Methodology Statement prepared by URBIS dated 16 February 2017.</p>	
Part E – Prior to Occupation or Commencement of Use	
<p>E1 (A) Certification of Noise Mitigation Measures</p> <p>Prior to the issues of an Occupation Certificate for any stage of the Approved Project, a report is to be prepared and submitted by a qualified acoustic engineer confirming that the development has been constructed in accordance with the recommendations of:</p> <ul style="list-style-type: none"> (a) The Acoustic Assessment Report, prepared by ARUP, September 2008; (b) Addendum Report prepared by Acoustic Logic Consultancy dated August 2009; and (c) Acoustic Assessment Report prepared by AECOM dated 7 October 2010 as may be relevant to the completed works. 	<p>E1 (A) Certification of Noise Mitigation Measures</p> <p>Prior to the issues of an Occupation Certificate for any stage of the Approved Project, a report is to be prepared and submitted by a qualified acoustic engineer confirming that the development has been constructed in accordance with the conditions of this approval. recommendations of:</p> <ul style="list-style-type: none"> (a) The Acoustic Assessment Report, prepared by ARUP, September 2008; (b) Addendum Report prepared by Acoustic Logic Consultancy dated August 2009; and (c) Acoustic Assessment Report prepared by AECOM dated 7 October 2010 as may be relevant to the completed works. <p><u>Reason:</u> Altered to ensure continued relevance to the whole site noise limit.</p>
<p>E1 Noise Control – Plant and Machinery</p> <p>Noise associated with the operation of any plant, machinery or other equipment on the site, shall not give rise to anyone or more of the following:</p> <ul style="list-style-type: none"> (1) Transmission of "offensive noise" as defined in the Protection of the Environment Operations Act 1997 to any place of different occupancy. (2) A sound pressure level at any affected residential property that exceeds the background (LA90, 15 minute) noise level by more than 5dB(A). The background noise level must be measured in the absence of noise emitted from the premises. The source noise level must be assessed as a LAeq, 15 minute (3) Notwithstanding compliance with (1) and (2) above, the noise from mechanical plant associated with the premises must not be audible in any habitable room in any residential property between the hours of 12.00 midnight and 7.00am. (4) Prior to issue of any Occupation Certificate a report is to be prepared and submitted by a qualified acoustic engineer confirming that the development has been constructed in accordance with the recommendations in the Acoustic Assessment Report prepared by ARUP, September 2008 and addendum provided by Acoustic Logic Consultancy, 14 August 2009. 	<p>E1 Noise Control – Plant and Machinery</p> <p>Noise associated with the operation of any plant, machinery or other equipment on the site, shall not give rise to anyone or more of the following:</p> <ul style="list-style-type: none"> (1) Transmission of "offensive noise" as defined in the Protection of the Environment Operations Act 1997 to any place of different occupancy. (2) A sound pressure level at any affected residential property that exceeds the background (LA90, 15 minute) noise level by more than 5dB(A). The background noise level must be measured in the absence of noise emitted from the premises. The source noise level must be assessed as a LAeq, 15 minute (3) Notwithstanding compliance with (1) and (2) above, the noise from mechanical plant associated with the premises must not be audible in any habitable room in any residential property between the hours of 12.00 midnight and 7.00am. (4) Prior to issue of any Occupation Certificate a report is to be prepared and submitted by a qualified acoustic engineer confirming that the development has been constructed in accordance with the recommendations in the Acoustic Assessment Report prepared by ARUP, September 2008 and addendum provided by Acoustic Logic Consultancy, 14 August 2009 conditions of this approval. <p><u>Reason:</u> Item 1 is deleted as the use will be approved. If the approved use complies with the conditions of consent relating to noise, it can therefore not be considered 'offensive noise'.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
	Item 4 is to be amended to ensure continued relevance to the whole of site noise limits.
E2 Accessibility Prior to issue of an Occupation Certificate a certificate of compliance is to be prepared by an appropriately qualified person and submitted to the Certifying Authority confirming that the development complies with the recommendations in the Access Review Report (Morris Goding Accessibility Consulting, 10 September 2008).	E2 Accessibility Prior to issue of an Occupation Certificate a certificate of compliance is to be prepared by an appropriately qualified person and submitted to the Certifying Authority confirming that the development complies with the recommendations in the Access Review Report (Morris Goding Accessibility Consulting, 10 September 2008) Accessibility Design Review (McKenzie Group, 30 January 2018). <u>Reason:</u> The recommendations have been superseded by the Accessibility Design Review prepared by McKenzie Group, 30 January 2018.
E3 Fire Safety Certificate A Fire Safety Certificate shall be furnished to the PCA for all the Essential Fire or Other Safety Measures forming part of this approval prior to issue of the final Occupation Certificate. A copy of the Fire Safety certificate must be submitted to the relevant authority and Council.	No modification proposed as part of Modification 13.
E4 Annual Fire Safety Statement For any essential fire safety equipment, an Annual Fire Safety Statement must be provided to Council and the NSW Fire Brigade commencing within 12 months after the date on which the relevant authority initial Fire Safety Certificate is received.	No modification proposed as part of Modification 13.
E5 Road Damage The cost of repairing any damage caused to Council or other Public Authority's assets in the vicinity of the subject site as a result of construction works associated with the Approved Project, is to be met in full by the Proponent/developer prior to the issue of the final Occupation Certificate.	No modification proposed as part of Modification 13.
E6 Waste Management Prior to an Occupation Certificate being issued, the Certifying Authority must ensure that waste handling works have been completed in accordance with the Waste Management Plan; other relevant approval conditions; and any relevant Council policy.	E6 Waste Management Prior to an Occupation Certificate being issued, the Certifying Authority must ensure that waste handling works have been completed in accordance with the Waste Management Plan prepared by WSP dated 31 January 2018 ; other relevant approval conditions; and any relevant Council policy. <u>Reason:</u> to account for amendments to the Waste Management Plan
E7 Food Premises The construction, fit out and finishes or any proposed commercial food premises shall comply with Standard 3.2.3 of the Australian and New Zealand Standards Food Code under the Food Act 2003. All food preparation areas are to be inspected and certified by Council's Environmental Health Officers prior to use.	No modification proposed as part of Modification 13.
E8 Consolidation of allotments	No modification proposed as part of Modification 13.

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>The Switching Station allotment (Lot 121 DP 828957) is to be consolidated into the allotments comprising the Casino development. A plan of consolidation prepared by a registered surveyor and six (6) paper copies are to be submitted to Council prior to registration at the Lands and Property Information NSW (Department of Information and Land Management). Evidence of consolidation from the Lands and Property Information NSW shall be submitted to the consent authority and Council or the Principal Certifying Authority prior to the issue of an Occupation Certificate for the podium or hotel, whichever occurs first.</p>	
<p>E9 Sydney Water</p> <p>Prior to the issue of a relevant Occupation Certificate, a Section 73 Certificate is to be obtained from Sydney Water and shall be submitted to Council or the Principal Certifying Authority.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>E10 Traffic Management</p> <p>(1) Left In Left Out Only</p> <p>Signage is to be erected to indicate that the porte cochere access and egress driveways are restricted to left in left out movements. The signage is to be erected within the property boundary and maintained in good order. Signage is required prior to the issue of an Occupation Certificate.</p> <p>(2) Signage at Vehicle Egress</p> <p>The following signs must be provided and maintained within the site at the point(s) of vehicular egress requiring drivers to:</p> <ul style="list-style-type: none"> (i) Stop before proceeding onto the public way; and (ii) "Give Way To Pedestrians" before crossing the footway; or compelling drivers to "Give Way To Pedestrians and Bicycles" before crossing a footway on an existing or identified shared path route. 	<p>E10 Traffic Management</p> <p>(1) Left In Left Out Only</p> <p>Signage is to be erected to indicate that the porte cochere access and egress driveways are restricted to left in left out movements. The signage is to be erected within the property boundary and maintained in good order. Signage is required prior to the issue of an Occupation Certificate.</p> <p>(2) Signage at Vehicle Egress</p> <p>The following signs must be provided and maintained within the site at the point(s) of vehicular egress requiring drivers to:</p> <ul style="list-style-type: none"> (i) Stop before proceeding onto the public way; and (ii) "Give Way To Pedestrians" before crossing the footway; or compelling drivers to "Give Way To Pedestrians and Bicycles" before crossing a footway on an existing or identified shared path route. <p><u>Reason:</u> Is proposed to be deleted to accommodate the proposed right turn into the Jones Bay Road Porte Cochere as per the microsimulation provided.</p>
<p>E11 Public Domain Works Completion</p> <p>An inspection of the works constructed on the public way will be undertaken by Council, and all identified defects must be rectified by the developer prior to the release of the Public Domain Works Deposit.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>E1(B) Operational Environmental Management Plan</p> <p>The proponent shall prepare an Operational Environmental Management Plan (OEMP) prior to issue of an Occupation Certificate for the Level 3 Sovereign Room expansion in consultation with the Department of Primary Industries (DPI Water).</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>E13 GFA Certification</p> <p>A Registered Surveyor is to certify that the Gross Floor Area (GFA) of the Star City Complex prior to the issue of an Occupation Certificate for the Multi Use Entertainment Facility.</p>	<p>No modification proposed as part of Modification 13.</p>
Part F – Post Occupation & Ongoing Operational	
<p>F1 No Speakers or Music Outside</p> <p>Speakers must not be installed and music must not be played in any of the outdoor areas associated with the premises including the public domain and outdoor terraces/decks/gaming areas, excluding the:</p> <ul style="list-style-type: none"> a) Level 3 Outdoor Pool Deck area of the hotel development; b) Level 3 Pirrama Road Entertainment Deck, c) Level 1 Pirrama Road Outdoor Gaming Areas, d) Oasis Outdoor Gaming Area fronting Pyrmont Street (as shown on Drawing No MOD-A9202A); and e) Sovereign Level 3 Outdoor Gaming Areas within the site and those fronting Pirrama Road and Pyrmont Streets (as shown on Drawing No MOD14-A0703). <p>Speakers located within the premises must not be placed so as to direct the playing of music towards the outdoor areas associated with the premises.</p>	<p>Retain with no changes</p>
<p>F1A Trial Use of Speakers and Music Outside</p> <p>The use of speakers and amplified music in those outdoor areas identified in Condition F1(b) to F1(e) above is subject to a two-year trial period which shall commence on grant of approval of MP08_0098 MOD 14 or within one month of the issue of an Occupation Certificate for the outdoor areas whichever is the latter. The proponent shall notify Council and the Department in writing of the commencement of the trial period for each of the outdoor areas identified in Condition F1(b) to F1(e) above. Email notification to Council of the commencement of the trial period shall be sent to liquor@cityofsydney.nsw.gov.au.</p> <p>Note: A modification application may be lodged to continue the trial period specified in this condition permanently. Provided the application to continue the trial period is lodged no earlier than 120 days before the end of the trial period and no later than 60 days before the end of the trial period, then the activity the subject of the application for extension may continue until such time as the application is determined.</p>	<p>Retain with no changes</p>
<p>F1B Level 3 Outdoor Pool Deck</p> <p>Operation of speakers at the Level 3 Outdoor Pool Deck areas of the hotel must be in accordance with the following:</p> <ul style="list-style-type: none"> (a) The maximum allowable speaker output for playback of background music is to comply with the recommendations identified in the AECOM Noise Emissions Assessment dated 6 June 2012; 	<p>Retain with no changes</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>(b) The speakers that are permitted to be installed to the Level 3 Outdoor Pool Deck area of the hotel development are limited to twelve Meyer Sound Miniature Speakers (MM-4XP) and two subwoofers. The location of the speakers is illustrated in plan titled 'Darling Pool Terrace';</p> <p>(c) Management/administrative measures to assist in reducing operation noise impacts are to comply with the Operational Noise Management Plan prepared by AECOM and dated 6 June 2012, and includes but is not limited to the following:</p> <ul style="list-style-type: none"> i. Restricting the number of patrons permitted on the pool deck to 200 in the 'Night-time (midnight to 7.00 am) period; ii. The ELIAS system is not to be used during the 'Night-time' (midnight to 7.00 am) period; iii. No announcements are to be made during the 'Night-time' (midnight to 7.00 am) period, except in the case of an emergency; and <p>No DJ/live band/amplified music events are to commence during the 'Night-time' (midnight to 7.00 am) period.</p>	
<p>F1C Level 3 Pirrama Road Entertainment Deck</p> <p>Speakers and amplification equipment must be installed/constructed and operated at the Level 3 Pirrama Road Entertainment Deck in accordance with all recommendations and performance parameters contained in the report entitled <i>The Star – Pirrama Road External Entertainment Deck – Amplified Music Acoustic Assessment</i>, prepared by Renzo Tonin and Associates and dated 8 May 2014. The use of the equipment must comply with the following:</p> <ul style="list-style-type: none"> (a) The use of the Level 3 Pirrama Road Entertainment Deck must comply with maximum allowable noise levels outlined in Section 4.2 (Table 6) of abovementioned report; (b) Sound speaker noise levels from each speaker must comply with Section 5 (Table 7) of the report entitled <i>The Star – Pirrama Road External Entertainment Deck – Amplified Music Acoustic Assessment</i>, prepared by Renzo Tonin and Associates and dated 8 May 2014 (c) The use of the speakers for the playing of live or recorded music is limited to between 7.00am and 12.00am; (d) There shall be no playing of amplified music or the use of speakers between 12.00am and 7.00am; (e) Music noise limits to be controlled using a sound-pressure measurement/limiter device (e.g. CESVA LRF-04 and LRF-05 or APEX Argos and HERA) so that music noise levels will be controlled dependent on the overall noise generated by patrons and music combined. Where an alternative sound system is proposed, it is recommended that the noise level be controlled by an electronic frequency dependant RMS limiting device (e.g. a Rane HAL, BSS Blu-16, Symetrix Jupiter 8 or MediaMatrix X-Frame 88); and (f) Management/administrative measures to assist in reducing operational noise impacts are to comply with the Operational Noise Management Plan entitled <i>The Use of Speakers and Delivery of Music on the Pirrama Road External</i> 	<p>Retain with no changes</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p><i>Entertainment Deck, The Star</i>, prepared by The Star Ltd and dated 8 May 2014; and</p> <p>(g) Notwithstanding compliance with (a) to (f) above operations on the Level 3 Pirrama Road Deck shall comply with the requirements of Conditions F5 and F6 when cumulatively assessed with other operations at the premises.</p>	
<p>F1D Use of speakers in outdoor areas</p> <ol style="list-style-type: none"> During the trial period (Condition F1A), speakers and amplification equipment must be constructed and operated at the Level 1 Pirrama Road Outdoor Gaming Area in accordance with all recommendations and performance parameters contained in the report entitled <i>The Star – Pirrama Road Level 1 Unenclosed Gaming Areas Speakers and Music Assessment</i>, prepared by Renzo Tonin and Associates and dated 8 May 2014. The use of the equipment must comply with the following: <ol style="list-style-type: none"> The use of the Level 1 Pirrama Road Outdoor Gaming Areas must comply with maximum allowable noise levels outlined in Section 4.2 (Table 6) of the abovementioned report; No PA (public address) announcements are permitted between 12 am and 7 am; Only low level background music that is below existing ambient noise levels in the Level 1 Pirrama Road Outdoor Gaming Areas is permitted to be played between 12 am and 7 am; The noise levels of the speakers and amplification equipment shall be controlled by an electronic dependant RMS limiting device (e.g. a Rane HAL, BSS Blu-16, Symetrix Jupiter 8 or MediaMatrix X-Frame 88) so that all noise emissions comply with the requirements of Condition F5; Management/administrative measures to assist in reducing operational noise impacts are to comply with the Operational Noise Management Plan entitled <i>The Installation and Use of Speakers to Deliver Background Music and Announcements to the Level 1 Unenclosed Gaming Areas, The Star</i>, prepared by Pure Projects and dated 8 May 2014; and Notwithstanding compliance with paragraphs (a) to (e) above operations on the Level 1 Pirrama Road Deck shall comply with the requirements of Conditions F5 and F6 when cumulatively assessed with other operations at the premises. Any speakers and amplification equipment installed in the Oasis Outdoor Gaming Area, the expanded Level 1 Outdoor Gaming Area, or the Sovereign Outdoor Gaming Areas (internal to the site, fronting Pirrama Road or Pyrmont Street) must be constructed and operated in accordance with all recommendations and performance parameters contained in the report entitled <i>The Star – Pirrama Road Level 1 Unenclosed Gaming Areas Speakers and Music Assessment</i>, prepared by Renzo Tonin and Associates and dated 8 May 2014 and the recommendations of the Noise Impact Assessment prepared by WSP/Parsons Brinckerhoff dated September 2016 and Supplementary Report dated February 2017. The use of the equipment must comply with the following: 	<p>Retain with no changes</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<ul style="list-style-type: none"> (a) No PA (public address) announcements are permitted between 12 am and 7 am; (b) Only low level background music that is below existing ambient noise levels in the Level 1 Pirrama Road Outdoor Gaming Areas is permitted to be played between 12 am and 7 am; (c) The noise levels of the speakers and amplification equipment shall be controlled by an electronic dependant RMS limiting device (e.g. a Rane HAL, BSS Blu-16, Symetrix Jupiter 8 or MediaMatrix X-Frame 88) so that all noise emissions comply with the requirements of Condition F5; and (d) Management/administrative measures to assist in reducing operational noise impacts are to comply with the Operational Noise Management Plan entitled The Installation and Use of Speakers to Deliver Background Music and Announcements to the Level 1 Unenclosed Gaming Areas, The Star, prepared by Pure Projects and dated 8 May 2014; and (e) Notwithstanding compliance with paragraphs (a) to (d) above operations within the Unenclosed Gaming Areas shall comply with the following requirements: <ul style="list-style-type: none"> (i) All gaming machines in the unenclosed gaming areas are to be turned to half volume between 12 am and 7 am. (ii) The UGA is to be isolated off from the main gaming area via automatic door closers. (iii) Operation of each unenclosed gaming area shall comply with the requirements of Conditions F5 and F6 when cumulatively assessed with other operations at the premises. 	
<p>F1E Monitoring</p> <p>An appropriately qualified acoustic consultant who possesses the qualifications to render them eligible for membership of the Australian Acoustic Society, Institution of Engineers Australia or the Association of Australian Acoustic Consultants must be appointed within two weeks of the approval of MP08_0098 MOD 14 or prior to occupation of the areas nominated in condition F1 (b) to (e) and F3 (1) and (2) whichever is the sooner and details of that appointment submitted to Council. During the first 90 days of entertainment and use of outdoor speakers in those outdoor areas identified in Condition F1 (b) to (e) and F3 (1) and (2), the following acoustic measures must be undertaken:</p> <ol style="list-style-type: none"> 1. The acoustic consultant must: <ul style="list-style-type: none"> (a) Measure and verify that the cumulative noise emanating from the premises complies with the noise criteria in Condition F5 Noise; and (b) If necessary, make recommendations to ensure that the cumulative noise emanating from the premises complies with the noise. 2. The noise measurements must be: <ul style="list-style-type: none"> (a) Undertaken without the knowledge of the applicant, manager or operator of the premises; (b) Undertaken on at least three different occasions on three different days of the 	<p>Retain with no changes</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>week (excluding Monday, Tuesday and Wednesday) for a time period which is deemed suitable by the acoustic consultant to determine if cumulative noise emanating from the premises complies with the noise criteria in Condition F5 Noise; and</p> <p>(c) Submitted to the City of Sydney Council, Health and Building Area Manager (West) within 7 days of the testing.</p> <p>3. If the acoustic consultant recommends that additional treatment or works be undertaken under condition (1) (ii) above, those recommendations must be:</p> <p>(a) Submitted to the City of Sydney Council, Health and Building Area Manager (West) with the noise measurements as required in (2)(b) above; and</p> <p>(b) Implemented to the acoustic consultant's and the Council's satisfaction within one (1) month of the date of the acoustic consultant's report.</p> <p>4. If the acoustic consultant's recommendations are not implemented in accordance with this condition, the premises must not use/operate speakers in outdoor areas until such time as the recommendations are implemented and verified.</p>	
<p>F1F Noise Limiters</p> <p>Use of all amplification equipment must comply with the following:</p> <p>(a) All amplification equipment used on the pool deck must be controlled by a Root Mean Square (RMS) noise limiter, calibrated by an acoustic consultant in accordance with manufactures specification to ensure that resultant amplified sound complies with the Council's licensed premises noise criteria. The noise limited and any independent output adjustments on the speaker system must be tamper proof and only operable by the acoustic consultant.</p> <p>(b) All on-stage and front of house sound equipment must be controlled by noise limitation equipment as detailed in (a) above.</p> <p>(c) Access to noise limiter settings must be restricted to the Licensee of manager of the premises. The limiter settings/calibration levels must be available to Council officers upon request.</p> <p>(d) The Acoustical consultant must submit Certificate of Compliance to the Council to certify that the limiters are installed and calibrated to satisfy Council's noise criteria for the licensed venues.</p>	<p>F1F Noise Limiters</p> <p>Use of all amplification equipment must comply with the following:</p> <p>(a) All amplification equipment used on the pool deck <u>or the outside entertainment areas</u> must be controlled by a Root Mean Square (RMS) noise limiter, calibrated by an acoustic consultant in accordance with manufactures specification to ensure that resultant amplified sound <u>level</u> complies with the Council's licensed premises noise criteria condition F5A. The noise limited limiter and any independent output adjustments on the speaker system must be tamper proof and only operable by the acoustic consultant.</p> <p>(b) All on-stage and front of house sound equipment must be controlled by noise limitation equipment as detailed in (a) above.</p> <p>(c) Access to noise limiter settings must be restricted to the Licensee of manager of the premises. The limiter settings/calibration levels must be available to Council officers upon request.</p> <p>(d) The Acoustical consultant must submit Certificate of Compliance to the Council to certify that the limiters are installed and calibrated to satisfy Council's noise criteria for the licensed venues condition F5A.</p> <p><u>Reason:</u> To satisfy the requirements of condition F5A regarding</p>
F1G Complaints Handling	F1G Complaints Handling

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>The Proponent shall operate a noise complaint handling procedure for the use of all outdoor speaker and amplification systems in accordance with the relevant Operational Environmental Management Plan (OEMP) including:</p> <ul style="list-style-type: none"> (a) The OEMP prepared by AECOM and dated 6 June 2012; (b) The OEMP entitled The Use of Speakers and Delivery of Music on the Pirrama Road External Entertainment Deck, The Star, prepared by Pure Projects and dated 8 May 2014; and (c) The OEMP entitled The Installation and Use of Speakers to Deliver Background Music and Announcements to the Level 1 Unenclosed Gaming Areas, The Star, prepared by Pure Projects and dated 8 May 2014. <p>Should a noise complaint be received by Council and/or the Department that is substantiated, the speakers are to be decommissioned and music must cease until the noise emissions from the use of all outdoor speaker and amplification systems can comply with the noise criteria of Condition F5.</p>	<p>The Proponent shall operate a noise complaint handling procedure for the use of all outdoor speaker and amplification systems in accordance with the relevant Operational Environmental Management Plan (OEMP) including:</p> <ul style="list-style-type: none"> (a) The OEMP prepared by AECOM and dated 6 June 2012; (b) The OEMP entitled The Use of Speakers and Delivery of Music on the Pirrama Road External Entertainment Deck, The Star, prepared by Pure Projects and dated 8 May 2014; and (c) The OEMP entitled The Installation and Use of Speakers to Deliver Background Music and Announcements to the Level 1 Unenclosed Gaming Areas, The Star, prepared by Pure Projects and dated 8 May 2014. <p>Should a noise complaint be received by Council and/or the Department that is substantiated, the speakers are to be decommissioned and music must cease until the noise emissions from the use of all <u>any relevant</u> outdoor speaker and amplification systems can comply with the noise criteria of Condition F5.</p> <p><i>Reason: Retained to ensure methodology is in place to effectively address complaints should they occur. Updated to refer to recommended condition changes.</i></p>
<p>F2 Transport and Traffic</p> <p>(1) The recommendations of the Transport Impact Report and Supplementary Traffic Report submitted with the PPR are to be implemented including:</p> <ul style="list-style-type: none"> (a) Reviewing and monitoring the performance of the Murray Street / Pyrmont Bridge Road intersection following completion of the project. (b) Retaining and enhancing access to public transport facilities. (c) The operation of the porte cochere is to be managed by staff attendants during special events and at peak times to ensure minimal queuing of vehicles and that pedestrian safety is maximised. 	<p>No modification proposed as part of Modification 13.</p>
<p>F3 Hours of operation – outdoor gaming areas and terraces</p> <ol style="list-style-type: none"> 1. The hours of operation of the following areas is restricted to between 7.00am and 12.00 midnight, Mondays to Sunday inclusive: <ol style="list-style-type: none"> a. Level 3 Sovereign Room outdoor gaming areas fronting Pirrama Road and Pyrmont Street; b. Level 2 Oasis outdoor gaming area fronting Pyrmont Street; and c. Level 1 outdoor gaming areas fronting Pirrama Road. 2. The hours of operation of balconies serving the private gaming rooms 	<p>F3 Hours of operation – outdoor gaming areas and terraces</p> <ol style="list-style-type: none"> 1. The hours of operation of the following areas is restricted to between 7.00am and 12.00 midnight, Mondays to Sunday inclusive: <ol style="list-style-type: none"> a. Level 3 Sovereign Room outdoor gaming areas fronting Pirrama Road and Pyrmont Street; b. Level 2 Oasis outdoor gaming area fronting Pyrmont Street; and c. Level 1 outdoor gaming areas fronting Pirrama Road. 2. The hours of operation of balconies serving the private gaming rooms adjacent to Union Street are restricted to between 10:00am and 10:00pm, Mondays to

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>adjacent to Union Street are restricted to between 10:00am and 10:00pm, Mondays to Sundays inclusive.</p> <ol style="list-style-type: none"> Notwithstanding (1a) above the Level 3 Sovereign Room outdoor gaming areas may operate 24 hours per day Mondays to Sundays (inclusive) for a two-year trial period which shall start on commencement of use of the outdoor terrace, Notwithstanding (1b), (1c) and (2) above the outdoor areas may operate 24 hours per day Mondays to Sundays (inclusive) for a two year trial period which shall commence on grant of approval of Modification 14. The proponent shall notify Council and the Department in writing of the commencement of the trial period for each of the outdoor areas identified in (1) and (2) above . Email notification to Council of the commencement of the trial period shall be sent to liquor@cityofsydney.nsw.gov.au. Operation of all outdoor areas shall comply with the requirements of Condition F5 and F6 when cumulatively assessed with other operations at the premises. 	<p>Sundays inclusive.</p> <ol style="list-style-type: none"> Notwithstanding (1a) above the Level 3 Sovereign Room outdoor gaming areas may operate 24 hours per day Mondays to Sundays (inclusive) for a two year trial period which shall start on commencement of use of the outdoor terrace, Notwithstanding (1b), (1c) and (2) above the outdoor areas may operate 24 hours per day Mondays to Sundays (inclusive) for a two year trial period which shall commence on grant of approval of Modification 14. The proponent shall notify Council and the Department in writing of the commencement of the trial period for each of the outdoor areas identified in (1) and (2) above . Email notification to Council of the commencement of the trial period shall be sent to liquor@cityofsydney.nsw.gov.au. Operation of all outdoor areas shall comply with the requirements of Condition F5 and F6 when cumulatively assessed with other operations at the premises. <p>Reason: Approved Condition B5 requires an Operational Noise Management Plan (ONMP) to be prepared for the site in line with cumulative criteria for the site (condition F5). Noise management controls currently in operation (including hours of use) will be incorporated into the ONMP to ensure that such controls continue to be part of the operations of the site.</p>
<p>F4 Mechanical Plant and Equipment</p> <p>Noise associated with mechanical plant and equipment associated with the approved works must not give rise to anyone or more of the following:</p> <ol style="list-style-type: none"> Transmission "offensive noise" as defined in the Protection of the Environment Operations Act 1997 to any affected receiver. A sound pressure level at any affected receiver that exceeds the background (LA90, 15 minute) noise level by more than 5dB(A). The background noise level must be measured in the absence of noise emitted from the use in accordance with Australian Standard AS 1055. <p>Note: The method of measurement of vibration being carried out in accordance with "Assessing Vibration: Technical Guidelines: - DEC (EPA) AS 1055 for sound level measurements.</p>	<p>F4 Mechanical Plant and Equipment</p> <p>Noise associated with mechanical plant and equipment associated with the approved works must not give rise to anyone or more of the following:</p> <ol style="list-style-type: none"> Transmission of "offensive noise" as defined in the Protection of the Environment Operations Act 1997 to any affected receiver <u>outside the boundary</u>. A sound pressure level (L_{Aeq15 minute}) at any affected receiver <u>outside the boundary</u> that exceeds the RBL background (LA90, 15 minute) noise level by more than 5dB(A). The RBL background noise level must be measured in the absence of noise emitted from the use in accordance with the NSW EPA Noise Policy for Industry and Australian Standard AS 1055. <p>Note: The method of measurement of vibration being carried out in accordance with "Assessing Vibration: Technical Guidelines: - DEC (EPA) AS 1055 for sound level measurements.</p> <p>Reason: retained with additional clarification of applicable receivers.</p>
<p>F5 Noise</p> <p>Cumulative noise caused by the approved use including music and other activities must comply with the following criteria:</p> <ol style="list-style-type: none"> The use must not result in the transmission of "offensive noise" as defined in the Protection of the Environment Operations Act 1997 to any place of different occupancy outside the boundary; 	<p>F5 Noise</p> <p>Cumulative noise caused by the approved use including music and other activities licensed premises when measured or assessed outside the boundary must comply with the following criteria:</p> <ol style="list-style-type: none"> The use must not result in the transmission of "offensive noise" as defined in the Protection of the Environment Operations Act 1997 to any place of different

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<ol style="list-style-type: none"> 2. The L10 noise level emitted from the use must not exceed 5dB above the background (L90) noise level in any Octave Band Centre Frequency (31.5 Hz to 8kHz inclusive) between the hours of 7.00am and 12.00 midnight when assessed at the boundary of the nearest affected property. The background noise level must be measured in the absence of noise emitted from the use. 3. The L10 noise level emitted from the use must not exceed the background (L90) noise level in any Octave Band Centre Frequency (31.5 Hz to 8kHz inclusive) between the hours of 12.00 midnight and 7.00am when assessed at the boundary of the nearest affected property. The background noise level must be measured in the absence of noise emitted from the use. 4. Notwithstanding compliance with (1) and (2) above, the noise from the use must not be audible within any habitable room in any residential property between the hours of 12.00 midnight and 7.00am. 5. The L10 noise level emitted from the use must not exceed the background noise level (L90) in any Octave Band Centre Frequency (31.5 Hz to 8kHz inclusive) by more than 3dB when assessed indoors at any affected commercial premises. 	<p>occupancy outside the boundary;</p> <ol style="list-style-type: none"> 2. The L10 noise level emitted from the use must not exceed 5dB above the background (L90) noise level in any Octave Band Centre Frequency (31.5 Hz to 8kHz inclusive) between the hours of 7.00am and 12.00 midnight when assessed at the boundary of the nearest affected property. The background noise level must be measured in the absence of noise emitted from the use. 3. The L10 noise level emitted from the use must not exceed the background (L90) noise level in any Octave Band Centre Frequency (31.5 Hz to 8kHz inclusive) between the hours of 12.00 midnight and 7.00am when assessed at the boundary of the nearest affected property. The background noise level must be measured in the absence of noise emitted from the use. 4. Notwithstanding compliance with (1) and (2) above, the noise from the use must not be audible within any habitable room in any residential property between the hours of 12.00 midnight and 7.00am. 5. The L10 noise level emitted from the use must not exceed the background noise level (L90) in any Octave Band Centre Frequency (31.5 Hz to 8kHz inclusive) by more than 3dB when assessed indoors at any affected commercial premises. <p>Reason: Retained as this condition forms the basis of the cumulative entertainment noise requirements imposed on the site.</p>
	<p>F5A Noise (Other Operational Noise)</p> <p>Noise associated with uses other than that defined in condition F5 must not give rise to:</p> <p>Noise associated with uses other than that defined in condition F5 must not give rise to: A sound pressure level ($L_{Aeq,15minute}$) at any affected receiver outside the boundary that exceeds the RBL noise level by more than 5dB(A) when considered cumulatively with noise emitted by mechanical plant and equipment the subject of condition F4. The RBL must be measured in the absence of noise emitted from the site in accordance with the NSW EPA Noise Policy for Industry and Australian Standard AS 1055.</p> <p>Reason: New condition proposed to satisfy that all noise sources on the site are captured in the conditions.</p>
<p>F6 Acoustic Review</p> <p>Within 3 months of operation of the approval of MP08_0098 MOD 14, and within 3 months of the issue of an Occupation Certificate for the areas nominated below whichever is the sooner, acoustic review demonstrating compliance with the above conditions is to be submitted to the Department. The reviews are to include specific</p>	<p>F6 Acoustic Review</p> <p>Within 3 months of operation of the approval of MP08_0098 MOD 14 MOD 13, and within 3 months of the issue of an Occupation Certificate for the areas nominated below whichever is the sooner, acoustic review demonstrating compliance with the above conditions is to be submitted to the Department. The reviews are to include</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>noise monitoring and testing at relevant times and in accordance with the Star's Noise Management Plan. Areas nominated are:</p> <ul style="list-style-type: none"> • Level 3 Unenclosed gaming area on Pyrmont St side; • Level 3 Unenclosed gaming area and Level 1 Unenclosed gaming area on Pirrama Road side; • Level 3 Pre-function space on Pyrmont St side; • Level 3 Sovereign Room Outdoor Terrace; • Level 1 Pirrama Road Outdoor Gaming Area; • Level 3 Pirrama Road Entertainment Deck; and • Level 2 Oasis Outdoor Gaming Area. 	<p>specific noise monitoring and testing at relevant times and in accordance with the Star's Noise Management Plan. Areas nominated are:</p> <ul style="list-style-type: none"> • Level 3 Unenclosed gaming area on Pyrmont St side; • Level 3 Unenclosed gaming area and Level 1 Unenclosed gaming area on Pirrama Road side; • Level 3 Pre-function space on Pyrmont St side; • Level 3 Sovereign Room Outdoor Terrace; • Level 1 Pirrama Road Outdoor Gaming Area; • Level 3 Pirrama Road Entertainment Deck; and • Level 2 Oasis Outdoor Gaming Area. • <u>Level 5 Terrace</u> • <u>Level 7 Pool Deck</u> • <u>External F&B Locations (union Street, Pirrama Road, and Jones Bay Road)</u> <p><u>Reason:</u> Retained with new outdoor areas included.</p>
<p>F7 Pirrama Road External Entertainment Deck</p> <p>The number of patrons on the Pirrama Road external entertainment deck shall not exceed a maximum of:</p> <p>a. 1,000 patrons between 7.00am and 12.00am; and</p> <p>b. 600 patrons between 12.00am and 7.00am</p>	<p>No modification proposed as part of Modification 13.</p>
<p>F8 Public Domain Works</p> <p>All works to the public domain, including rectification of identified defects, are subject to a 12 month defects liability period from the date of final completion as provided on the Certificate of Completion for public domain works.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>F9 Loading Dock Management Plan</p> <p>The Proponent shall implement the provisions of the amended Loading Dock Management Plan prepared in accordance with condition B10A.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>F10 Copy of Consent and Management Plan</p> <p>A full and current copy of the Major Project Approval MP08_0098 and a current copy of the site wide Operational Management Plan and the Security Management Plan must be kept on-site and made available to relevant agencies upon request. In the event of any inconsistency, the conditions of this major project approval will prevail over the Operational Plan of Management.</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>F11 Signs/Goods in the Public Way</p> <p>No signs or goods are to be placed on the public footway or roadway adjacent to the property.</p>	<p>No modification proposed as part of Modification 13.</p>
<p>F12 Emissions</p> <ul style="list-style-type: none"> a) The use of the premises must not give rise to the emission of gases, vapours, dusts or other impurities which are a nuisance, injurious or prejudicial to health. b) Gaseous emissions from the development must comply with the requirements of the Protection of Environment Operations Act, 1997 and Regulations. Uses that produce airborne particulate matter must incorporate a dust collection system. c) 	<p>No modification proposed as part of Modification 13.</p>
<p>F13 Maximum Capacity of Oasis Unenclosed Gaming Area</p> <ul style="list-style-type: none"> a) The maximum number of persons (including staff, patrons and performers) permitted on the unenclosed gaming area at any one time is 91 persons. b) The capacity for the unenclosed gaming area shall not exceed the maximum numbers at any given time. c) The manager/licensee is responsible for ensuring the number of persons does not exceed that specified above. d) A sign in letters not less than 25mm in height must be fixed at the main entry point to the premises alongside the Licensee's name stating the maximum number of persons, as specified in the development consent, that are permitted in the building. <p>Note: Clause 98D of the <i>Environmental Planning and Assessment Regulation 2000</i> requires a sign specifying maximum number of persons permitted in the building to be displayed in a prominent position for the following types of premises:</p> <ul style="list-style-type: none"> (i) entertainment venue, (ii) function centre, (iii) pub, (iv) registered club, (v) restaurant. 	<p>No modification proposed as part of Modification 13.</p>
<p>F14 Surveillance Cameras</p> <p><i>Operations on site must comply with the relevant provisions (as in force at any time) of the following:</i></p> <ul style="list-style-type: none"> a) <i>Casino Control Act 1992 (NSW) (Casino Control Act)</i> b) <i>Casino Control Regulation 2009 (NSW) (Casino Control Regulations)</i> c) <i>Security Industry Act 1997 (Security Industry Act)</i> <p>generally and specifically in relation to the following matters:</p>	<p>No modification proposed as part of Modification 13.</p>

MP08_0098 Conditions of Approval (including Mod 14)	Proposed Modifications to Conditions of Consent for Mod 13
<p>(i) Surveillance (including but not limited to the operation of CCTV cameras)</p> <p>(ii) Retention of CCTV records</p> <p>(iii) Recording and notification of incidents</p> <p>(iv) Signage associated with licensed premises and gaming areas</p> <p>(v) The operation of security at and in the vicinity of the licensed premises.</p> <p>Without limiting the above, the CCTV network on site must operate in accordance with any and all approvals granted by the casino regulator (Liquor and Gambling New South Wales) under the <i>Casino Control Act 1992</i> and <i>Casino Control Regulation 2009</i>.</p>	
<p>F15 Waste and Recycling Management - Minor</p> <p>The Proposal must comply with the relevant provisions of Council's <i>Policy for Waste Minimisation in New Developments 2005</i> which requires facilities to minimise and manage waste and recycling generated by the Proposal.</p>	<p>No modification proposed as part of Modification 13.</p>
	<p><i>Condition F16 is inserted as follows:</i></p> <p>F 16 Operation and Management of the Neighbourhood Centre</p> <p>The operation and management of the Neighbourhood Centre Management and Operation shall be in accordance with the draft Neighbourhood Centre Operational Plan of Management referenced in condition A3.</p> <p><i>Reason: to account for the management of the Neighbourhood Centre.</i></p>
	<p><i>Condition F17 is inserted as follows:</i></p> <p>F 17 Retention of Design Architect</p> <p>In relation to the Mod 13 tower and Ribbon elements, the design architect is to be retained to be involved in the delivery of design documentation, contract documentation and construction phase of the scheme to deliver consistency with the design of the Proposal delivered under the Alternative Design Excellence process. The design architect:</p> <p>(i) is to have full access to the site and is to be authorised by the applicant to respond directly to the consent authority where information or clarification is required in the resolution of design issues throughout the life of the project;</p> <p>(ii) evidence of the design architects commission is to be provided to the Department of Planning and Environment prior to release of a relevant Construction Certificate"</p> <p>It is noted that the design architect may work in association with other architectural practices but is to retain a leadership role over design decisions.</p> <p><i>Reason: to retain access for the design architect in order to deliver the Proposal as modified.</i></p>

13 STATEMENT OF COMMITMENTS

PROPONENTS STATEMENT OF COMMITMENTS IN RELATION TO MODIFICATION 13

Preparation of a Green Travel Plan

This plan will detail a range of incentives and management options to encourage public transport and other sustainable transport models to the site by staff and visitors.

Implementation: Plan to be submitted to the Department of Planning and Environment for approval prior to the commencement of construction of the relevant stage of development and to be implemented prior to the occupation of the relevant stage.

Preparation of a Fire Engineering Report

Preparation of a Fire Engineering Report for the site which incorporates the fire life safety principles.

Implementation: Fire Engineering Reports to be prepared for the relevant stage of the development to be completed prior to issue of the Occupation Certificate and an amalgamated Fire Engineering Report to be completed prior to issue of the final Occupation Certificate.

Preparation of a Consolidated Operational Plan of Management

A consolidated Operational Plan of Management addressing operational aspect of the approved development to be prepared.

Implementation: The consolidated Operational Plan of Management to be submitted to the Department of Planning and Environment prior to the release of the Occupation Certificate for the Ritz Carlton Tower.

14 CONCLUSION

The Star has operated onsite since 1994 and, as it has grown and evolved into an integrated tourist and entertainment resort facility, it has contributed to the growth and development of the Pyrmont area. The Star is a unique and iconic destination and event space for domestic and international tourists. The Star plays an important role in the economy of Sydney and NSW, and the Proposal under Mod 13 presented in this EAR will ensure that The Star continues to be a world-class tourism and entertainment destination.

The expansion in floor space to accommodate a new hotel and residential apartments, additional restaurant and entertainment space, as well as a wide range of streetscape improvements have been designed to integrate the Proposal into the Pyrmont locality today, and the emerging context of Sydney's western harbour.

This EAR has outlined the key features of the Proposal, including the architectural, economic, social, and environmental principles that have guided the design of the Proposal.

The EAR and accompanying technical reports have evaluated the Proposal from a merits perspective by effectively and comprehensively addressing the SEARs, and assessing the Proposal against the relevant statutory planning and policy provisions. Mitigation measures have been recommended where required and will be implemented during both the construction and operational phases through efficient and effective onsite management. The EAR has addressed the SEAR 1 requirement relating to 'limited environmental impacts' by considering the environmental impacts of Mod 13 in relation to those environmental impacts that have already been assessed for the Approved Project.

The EAR and accompanying technical reports present a comprehensive and soundly based analysis of the environmental consequences of the Proposal. The EAR has demonstrated that, in the context of the Approved Project, none of the potential environmental consequences identified and addressed in this EAR fall outside the scope of what the Minister, acting reasonably, could conclude were limited environmental consequences beyond those which had been the subject of assessment.

The EAR also demonstrates that the Proposal will deliver several positive outcomes because:

- ◆ It will improve and enhance the operations of The Star and enable its continued operation as a world-class integrated resort;
- ◆ It will have positive economic and social benefits for the Pyrmont area, and the wider Sydney metropolitan area and NSW generally delivering local employment opportunities and additional housing choice;
- ◆ The Proposal will create a landmark, exemplar development that contributes positively to the overall architecture of the city taking into account both current urban setting and future urban context;
- ◆ The proposed public domain and access improvements will significantly improve the public interface with The Star and create a more pedestrian friendly and inclusive environment;
- ◆ The Proposal will deliver high quality and positive residential amenity for the future residential of the development. Balancing the needs of future occupants, whilst limiting potential external environmental impacts;
- ◆ The Proposal will encourage public transport patronage and minimise impacts on car traffic within the local area;
- ◆ The Proposal will achieve sustainability best practice outcomes and has been recognised by the Green Building Council. The Proposal will improve energy efficiency capability of The Star;
- ◆ The Proposal provides provision for 20% 'Universal Design' units and 15% 'Adaptable Units' will have a positive accessibility outcome as it will enable occupants to continue living in the same home as their mobility needs change;
- ◆ The proposed design is a result of a robust design excellence process, and will enhance the Pyrmont peninsula in terms of the built form, streetscape and public domain; and
- ◆ The proposed Neighbourhood Centre will provide a significant social benefit on the site by providing a diverse range of social spaces for use by the local community.

In conclusion, the Proposal as presented and assessed in this EAR has strategic and site-specific merits, will deliver social and economic benefits to the Pyrmont, Sydney and NSW economies and communities, and will result in limited environmental impacts beyond those already assessed for the Approved Project.

THE  STAR