

State Significant Development Further Information and Response to Submissions



161 Sussex Street Redevelopment

Submitted to Department of Planning and Infrastructure On Behalf of GL investment Co Pty Ltd GL No 1 Trust

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1.0 Introduction

The Environmental Impact Statement (EIS) for the application for State Significant Development (SSD) of the Four Points by Sheraton Hotel at 161 Sussex Street, Sydney was publicly exhibited for a period of 45 days between 12 September 2012 and 26 October 2012.

In total 118 submissions were received in response to the public exhibition of the SSD application. This included submissions from government agencies and authorities, commercial building owners and the general public, as follows:

- Government authorities and agencies 10;
- Commercial property owners 3; and
- Members of the public 105 comprising:
 - Astoria Apartments 34
 - The Berkeley 69
 - Other 2.

In addition, the Department of Planning and Infrastructure (DP&I) has requested additional information and/or clarification of a number of matters prior to finalising its assessment of the project.

The proponent, GL Investment Co Pty Ltd ATF GL No1 Trust, has reviewed and considered the submissions and has responded to the issues raised. This Response to Submissions (RTS), prepared by JBA on behalf of the proponent, sets out the response to the issues raised and details several amendments to the proposed development. This report is accompanied by plans and other specialist documentation.

Appendix A provides a detailed response to the issues raised by the various government agencies, commercial landowners and the general public. All matters have been dealt with on an issue by issue basis, an approach that has been adopted due to the significant amount of repetition in the submissions. These issues can be broadly grouped into the following categories:

- Built form and urban design;
- Building height;
- Overshadowing;
- Visual impact / view loss;
- Traffic and parking; and
- Loss of amenity.

2.0 Key Issues and Proponent's Response

This section of the report provides a detailed response to the key issues raised by DP&I.

2.1 Built Form and Urban Design

The DP&I requested additional information and further design work with regard to the proposed development's built form and urban design. Specifically it asked for:

- a) Design options for the western elevation under the meeting rooms in order to achieve a significantly improved urban and architectural design or artwork appearance.
- b) Design options for the articulation to the roof form of the convention and function area in order to soften the strong horizontality of the form.
- c) Further calculations of floor space ratio for the proposed development in accordance with the City of Sydney Local Environment Plan to enable comparison with the surrounding context.

2.1.1 Western Elevation

Further design work has been undertaken to produce a western elevation that presents a more visually interesting and varied facade to Darling Harbour (refer **Figure 1**). As shown in updated Architectural Plans prepared by Cox Richardson Architects (**Appendix B**) the western elevation is now divided into three distinct expressions, these being the southern main hall, the north function space and lower volume pre-function spaces. The design and location above the roadway mean that the podium will be visually read as an integrated piece of infrastructure design sitting over the freeway structure.

The roof structure for this part of the building has also been comprehensively redesigned and now presents as a folded roof element that positively adds to a distinct architectural expression when viewed from Darling Harbour. The new roof design highlights the lower levels of the building and effectively breaks down its mass when viewed from the west. The pitched roof elements also make a subtle contemporary reference to the existing roof peaks of the heritage listed Corn Exchange.

Through the use of glazing, solid building materials, landscaping and variation in building form Cox Richardson have been able to develop a building facade that is both articulated and attractive, and which once complete will positively enhance the appearance of the cityscape when viewed from Darling Harbour.

Overall the proposed new low rise conference/function component will provide a strong solid and visually striking podium to the western elevation.

2.1.2 Roof Form

The roof of the convention and function area has been comprehensively redesigned to provide a more distinctive and varied roof form that adds to the visual interest of the building and breaks up the horizontality of the of the low rise podium extension. Key features of the revised design include:

 Use of a distinctive, dynamic folded plate roof structure that draws attention to the base of the building and effectively breaks down its visual mass when viewed from Darling Harbour.

- Pitched roof elements that make a subtle contemporary reference to the traditional pitched roof forms such as that of the heritage listed Corn Exchange.
- Varied height in the roof form across the entire length of the western elevation, including variations in the height and design of the northern and southern roof components.
- Use of landscaping along the roof terraces to soften and visually break-up the roof form.

Overall the revised design represents a substantial improvement on that previously proposed and once complete will make a significant positive contribution to the appearance of the city when viewed from Darling Harbour (refer Figure 1 and Appendix B).



Figure 1 – New western elevation and roof structure

2.1.3 Floor Space Ratio Calculations

Updated floor space calculations have been prepared for the proposed development in accordance with the definition of 'gross floor area' under the Sydney Local Environment Plan 2012. The floorspace diagrams and calculations confirm that the proposed development combined with the existing buildings on site will have an overall maximum gross floor area of 102,636m², which equates to a floor space ratio (FSR) of 9.15:1 based on a total site area of 11,223m².

Based on the site area, building height and density of built form the proposed FSR is considered to be consistent or below that of surrounding, existing developments including the Allianz building, Darling Park and the BT Tower.

A copy of the floor space schedule and calculations is provided at Appendix D.

2.2 View Loss

a) DP&I has requested further justification of view impacts to the Astoria apartments, in the event that the adjacent car park is not redeveloped or increased in height.

 b) Further justification of the view impacts from 2 Market Street was also requested.

2.2.1 Astoria Apartments

An updated Visual Impact Report has been prepared by GMU and is located at **Appendix E**. As noted in the report, apartments within the Astoria Tower currently enjoy a range of existing views that can be broadly categorised as:

- District views to the west to Cockle Bay and Pyrmont available through the view corridor between the Darling Park towers.
- Oblique views of Darling Harbour available to the north, across side boundaries and through the application site.
- Views to the east toward the CBD and Queen Victoria Building.
- Views to the south toward the southern part of the CBD.

For the purpose of this exercise the analysis focuses on the oblique views of Darling Harbour available from various windows and balconies of apartments on the northern and western facades of the Astoria Tower. Specifically it is noted that the GMU Report has examined views available from levels 9, 23 and 32 to provide an effective representation and understanding of view impacts at key heights across the building.

Depending on the location of the unit within the building, views from the Astoria Tower through the application site vary in significance from low to medium-high. The Visual Impact Report shows that the proposed development will result in some loss and/or interruption of these existing views, with the greater impacts occurring at mid to higher level apartments. While the proposal will result in some impacts on these views it is noted that:

- The view from the Astoria Tower varies significantly depending on the floor level within the building and the vantage point within each floor. Many of the views that will be impacted are of low-medium significance.
- Views presently available from the Astoria Tower, through the air space above the site, are not 'owned' by the residents of the Astoria.
- Many of the views available from the Astoria Tower apartments are partial views that are presently interrupted by Darling Park Towers and the existing Four Points Hotel. These views are not identified as an existing view that requires protection or a potential view that needs to be enhanced by building design.
- Views from the upper levels of the Astoria Tower are oblique wide angle views. The proposed tower will result in partial screening of these views but in the majority of instances views to Darling Harbour, Goat Island and Balls Head will continue to be available.
- Residents at the Astoria Tower that no longer have a clear view of Darling Harbour will continue to have an outlook from their apartments, ensuring an outcome that is consistent with the objectives and planning controls of the City of Sydney.
- The planning and development controls for the City of Sydney do not require the retention of views for residents. The lack of such a control acknowledges that it is extremely difficult in a highly urbanised environment such as the CBD for views to be retained. This is particularly the case given the location and setback of the Astoria Tower from the Harbour foreshore.
- In the absence of planning and development controls for the site, the proposal is considered to represent a reasonable and appropriate design outcome that

sits comfortably within its surrounding context. The view impact is therefore not caused by a non compliance with planning controls for the site.

- The lack of development controls for the site is considered to be an intentional planning strategy for the site that removes any potential restrictions and establishes a form of Enterprise Zone that encourages future development opportunities. A clear example of this approach is evidenced in the Darling Park development.
- The proposed building will still allow for some view sharing for residential apartments at the Astoria Tower apartments. A view to Darling Harbour, albeit slightly reduced, will still be available from the building.
- New South Wales Planning Principle for view sharing (Tenacity Consulting v Warringah [2004] NSWLEC 140) places specific importance on the difficulty of protecting views along the side boundaries of properties, stating that *"the protection of views across side boundaries is more difficult than the protection of views from front and rear boundaries" and that "the expectation to retain side views… is often unrealistic"*.

In addition to the above further investigation has identified that a legal and binding covenant was placed upon all contracts for units within the Astoria Tower apartments at the time of its construction, and which applies to the units in perpetuity. This covenant permits Sydney City Council to seal or enclose all windows along the northern and southern side boundaries in case of development on adjoining sites. This covenant has already been exercised along the southern boundary where windows have been sealed up to Level 24. The expectation that existing views from windows along the northern boundary can be retained in the long term is therefore considered to be unreasonable. A copy of the title document including the covenant is located at **Appendix F**.

In light of the above the visual impacts of the proposed development are considered to be acceptable. For further information regarding view impacts on the Astoria Apartments refer to the accompanying Visual Impact Report prepared by GMU and located at **Appendix E**.

2.2.2 2 Market Street (Allianz Building)

Further consideration has been given to the visual impacts of the proposed development on the Allianz Building. It is noted that the Allianz Building is a commercial building and as such the expectation that views will be protected is unrealistic given the building's location in a highly urbanised city centre. As shown in the architectural diagrams that accompany this response (**Appendix C**) the proposed development will result in some impact on views available to Darling Harbour from the Allianz Building. Whilst this is the case it is noted that:

- The exact nature of the views impacted by the proposal vary within the Allianz Building depending on the floor level and the vantage point within each floor.
- Views from the Allianz Building are presently available from Levels 10 upwards. Due to the height of the existing Four Points Hotel at no point are wider views of Darling Harbour available from a commercial floor within the Allianz Building. This point is illustrated in the Architectural Assessment of Building Impact prepared by Crone Partners on behalf of the owners of the Allianz Building (refer diagrams page 42).
- The Allianz Building is set back from the Harbour Foreshore. This together with the site's Central Sydney location means that it must be reasonable to expect the possibility that views from the Allianz Building would be screened by new development in the future.

- The planning and development controls for the City of Sydney do not provide for the retention of views for commercial buildings. The lack of such a control acknowledges that it is extremely difficult in a highly urbanised environment such as the CBD for views to be retained.
- The proposed tower has been designed to achieve a floorplate of sufficient size that responds to present day commercial office space needs. At 30m wide on its north-south axis, the width of the tower is consistent with or narrower than the large majority of tower buildings within the city. The narrow width of the tower allows for wider views of Cockle Bay.
- The proposed tower has been significantly set back from Sussex Street, ensuring a building separation distance of 44.58m, being well above the 34.41m required by City of Sydney planning controls (refer Figures 2 and 3). Once again the increased setback supports a more open view corridor to Cockle Bay.
- In the absence of planning and development controls for the site, the proposal is considered to represent a reasonable and appropriate design outcome that sits comfortably within its surrounding context.
- The proposed development will result in part of the view due west being screened, including views to Pyrmont Bridge. Whilst this is the case views will still be available to the majority of Cockle Bay. View loss impacts are therefore considered to be reasonable as a large portion of the view will still be retained.
- As illustrated in the Architectural Assessment of Building Impact prepared by Crone Partners on behalf of the owners of the Allianz Building, the loss of views to Darling Harbour experienced by the Allianz Building would be much the same even if the proposed tower was designed to have a height the same as that of the existing hotel.

In light of the points raised above the view impacts of the proposed development on the Allianz Building are considered to be acceptable.



Figure 2 - LEP building separation requirements (Source Cox Richardson Architects)



Figure 3 - Proposed building separation (Source: Cox Richardson Architects)

2.3 Heritage

The DP&I has requested and/or sought clarification on a number of heritage matters related to the proposed development. Specifically the following has been requested:

- a) A revised archaeological assessment prepared in accordance with Heritage Council guidelines. The revisions are to include a detailed assessment addressing the potential for archaeological remains to have survived recent development, reference findings of nearby foreshore areas of Darling Harbour (Cockle Bay), review of the potential for streets/laneways to contain archaeology in addition to extant heritage buildings, and provide future management policies.
- b) Options for improving views from the Corn Exchange to the Pyrmont Bridge and to Darling Harbour public domain by remodelling the mass of the proposed tower below level one (partially glazed) and potentially refining the structural supports, whilst maintaining references to the Corn Exchange parapet.
- c) Specific information about how the façade of the tower along Slip Lane (including its form, finishes and materials) responds to and interprets the heritage significance of its setting adjacent to the Corn Exchange, Dundee Arms and Wharf Lane. A larger scale elevation of this area detailing this information is to be provided.
- d) Information about how the awning over Wharf Lane interacts with the southern façade of the Dundee Arms, and whether there is any conflict with the windows or fabric of the Dundee Arms.
- e) Information about how the heritage fabric of Wharf Lane is to be conserved in the proposed development. Include information about the extent of existing significant fabric, and sectional drawings showing the relationship between the existing upper section of the lane (believed to have been conserved under the existing timber decking) and the new proposed ground floor finishes.
- f) Information of the proposed lane's floor finish and construction demonstrating how the Southern elevation of the Dundee Arms will not be adversely affected in terms damage over time to fabric (such as from dampness) and in terms of interpretation of its basement window openings. Options for setting back the

North and South edges of the proposed new Wharf Lane (including its potential to have a design treatment as a 'bridge') are to be provided as well as options for interpretation of the original lane below and of the side elevations of the Corn Exchange and Dundee Arms.

g) Further information about what uses are intended for the Corn Exchange and how the outdoor space adjacent to Slip Street works with these uses.

Responses to these issues are provided below.

2.3.1 Archaeological Assessment

An archaeological assessment has been undertaken by Casey and Lowe in accordance with Heritage Council guidelines and includes a review of the potential for archaeological remains to have survived recent development and for streets/laneways to contain archaeology in addition to extant heritage buildings. Future management policies are also set out in the report in the event that archaeological remains are discovered on site. Full details of the history and archaeological characteristics of the site are contained in the accompanying Archaeological Assessment and Impact Statement located at **Appendix G**.

2.3.2 Views from the Corn Exchange to Pyrmont Bridge

The design of the proposed tower has been amended to facilitate improved sight lines and views from the Corn Exchange to the Pyrmont Bridge and Darling Harbour. Specifically the alignment of the building's ground and level one facade facing Market Street have been recessed and redesigned, which as shown in **Figures 4** and **5** will help open up views to and from Corn Exchange Building to Pyrmont Bridge and vice-versa. This design change together with the removal of the existing tress on site will reinstate the historical visual relationship between the two heritage structures. For further details refer to the revised architectural plans and diagrams (**Appendices B** and **C**) prepared by Cox Richardson Architects.



Figure 4 - Previously proposed building podium (Source: Cox Richardson Architects)



Figure 5 – Amended building podium (Source: Cox Richardson Architects)

2.3.3 Podium Facade Treatment to Slip Lane

The proposed facade treatment to Slip lane has been divided into two distinct elevation treatments, these being the podium two storey glazed facade and the double volume fully glazed entry commercial lobby. The facade at this level has been simplified from the previous design to provide a neutral, elegant backdrop to the Corn Exchange. The height of the podium references the parapet height of the Corn Exchange building, and has been setback from the main facade alignment to provide a generous curtilage to the Corn Exchange and Sussex Street public domain. It is also noted that the double height glazed volume to commercial lobby at this level enables the opening up of views to and from heritage listed buildings.

2.3.4 Wharf Lane Design & Heritage

The proposed works to Wharf Lane have been redesigned to provide an outcome that is more sympathetic to, and which highlights the original heritage fabric of the area. A bridge structure is now provided in the original alignment of Wharf Lane with two openings with glazed balustrades provided on both the northern and southern edges of the bridge adjacent to the heritage buildings (refer **Figures 6** and **7**). These voids on either side of the bridge will reinforce the concept and feel of the bridge structure and will allow for views to the original heritage fabric of Wharf Lane below.

Timber floor cladding will be used for the full extent of bridge to provide a softer more heritage feel to the structure. Glazed/mesh openings on the ground plane will create points of interest within the structure and will allow for views of the original Wharf lane below. One of these openings is also proposed to be positioned on a diagonal angle to reflect the alignment and allow for clear views of the original sandstone wall of Wharf Lane on Slip Street.

The awning to the commercial tower entrance has been pulled back to ensure it no longer interferes with the balcony or setting of the Dundee Arms and the Corn Exchange. This revised design therefore now supports wider unobstructed views of Wharf Lane elevations of both listed buildings. Overall the revised proposal represents a sensitive design outcome that positively responds to and effectively highlights the heritage fabric and historical origins of Wharf Lane. The current proposal is therefore considered to address the heritage concerns raised by the DP&I. For further details refer to the Architectural Plans and Diagrams located at **Appendices B** and **C**.



Figure 6 - Revised Wharf Lane design (Source: Cox Richardson Architects)



Figure 7 - Revised Wharf Lane design (Source: Cox Richardson Architects)

2.3.5 Future Use of Corn Exchange

The Corn Exchange has been leased to a commercial tenant for a period of five (5) years with a further five (5) year extension option. This use is considered to be compatible with the building.

2.4 Ecologically Sustainable Development

The DP&I has requested the following with regard to ecologically sustainable development:

- a) Further information on how the proposed development will contribute to the Sydney Harbour Foreshore Authority Sustainability Policy targets, including an evaluation of the proposed development against:
 - the Sydney Harbour Foreshore Authority Sustainability Policy Section.
 - the Draft City of Sydney Development Control Plan 2010 Section 2.4 Ecologically Sustainable Development, 2.5 Water and 2.6 Waste.
- b) Further justification on the decision not to incorporate any renewable energy use in the development. Additional information is to include an evaluation of the potential for heating water for the proposed development using renewable energy (eg solar or heat exchange) for all or part of the proposed development. The information should also project the impact on the greenhouse emissions of the development, and the volume and proportion of gas that could be saved. Other renewable energy options should also be considered.
- c) Further justification on the intent not to harvest rainwater. This information should include design options for rainwater harvesting from roofs and hard surfaces and options for use of this water. The information should also show calculations on the potential impact on potable water use for the proposed

development including the likely volume and proportion of the total potable water use that could be saved.

- d) Further information about what additional measures would be required to achieve a five star NABERS Office Energy rating for the base building for the office component of the proposed development.
- e) Further information about the sustainability initiatives to be incorporated into the conference / function components of the development and how they compare to industry best practice (possibly by reference to the Green Star -Public Building (Pilot) rating tool, comparison with recently completed conference developments or by other appropriate references).
- f) Information about the sustainability of the materials proposed to be used in the development to clarify what is intended by *"consideration will be made to utilise environmentally responsible materials where possible"* (EIS Appendix P s2.5 and s3.4) and provide greater certainty.

Responses to these issues are provided below.

2.4.1 Strategic Policy Compliance

An ESD Strategies Report has been prepared for the proposed development by AECOM and is included at **Appendix H**. As set out in Section 4.0 of this report a number of measures are proposed for the development that will contribute to the Sydney Harbour Foreshore Authority Sustainability Policy targets. These include:

- NABERS Energy 5 Star Commercial Office;
- Combination of Co-generation and/or Solar Hot Water for the Hotel;
- Rainwater harvesting;
- Dedicated commercial office toilet exhaust system;
- Maximising of natural daylight to Function Rooms and Lobbies;
- Use of recycled produce in steel and concrete where feasible;
- Low VOC products, paints, sealants and flooring where feasible; and
- Building tuning.

The combination of these measures will ensure the proposed development contributes to the Sydney Harbour Foreshore Authority Sustainability Policy targets, whilst also positively responding to the requirements of the City of Sydney Development Control Plan 2012.

2.4.2 Renewable Energy Use

It is proposed to supplement the hotel's energy demand with a combination of solar thermal hot water and/or small co-generation.

If used to supplement a co-generation system, solar collectors will be placed on the roof of the function areas, with the size of the system to be determined following further detailed design and modelling.

In combination with the solar collectors, the ESD Strategy identifies that it may be possible to include a co-generation system to assist with the heating of water, and generating electricity on site. This electricity would be directed to the commercial office component to assists in achieving a high NABERS 5 Star rating.

The final system arrangement will be subjected to detailed demand modelling of domestic hot water and electrical energy. Further details are provided in the accompanying ESD Strategies Report located at **Appendix H**.

2.4.3 Rainwater Harvesting

Rainwater harvesting is proposed for the development and will involve the collection of rainwater from the roof of the new function/conference component of the building. Rainwater will then be used for cooling the tower and for toilet flushing. The final design of the rainwater harvesting system will be subject to detailed modelling and testing, but depending on the final storage capacity, the total reduction in potable water capacity could be as much as 15% for the new hotel.

2.4.4 Energy Efficiency

The proposed development is being designed to achieve a 4.5 Star rating in accordance with NABERS Energy Rating scheme, with the commercial office component designed to achieve a 5 Star NABERS Energy rating. Initiatives adopted to achieve the 5 Star rating will include:

- Active Chilled Beam perimeter with Low Temperature Variable Air Volume Centre zone air conditioning system.
- High efficiency chiller system incorporating primary variable speed pumping.
- Thermal energy metering of chilled and heating water serving the commercial office component and hotel component of the development.
- Dedicated cooling towers to serve the commercial office chilled water system.
- Dedicated tenant condenser water pump to serve the commercial office component.
- High efficiency modular boilers to provide heating hot water.
- Dedicated lift systems serving the commercial office component of the development.
- Lifts to be provided with regenerative braking.
- Low pressure air handling systems incorporating low face velocity coils and filters.
- Low energy lighting system to meet levels of 6 W/m² throughout the commercial office space.
- Dedicated toilet exhaust systems to serve the commercial office.
- Provision of high performance façade to serve the commercial office component of the development. A high performance façade can be achieved through high performing glass or a combination of high performing glass and external shading.
- Provision of small co-generation system to generate hot water for the hotel component of the building and generate electricity for the commercial office base building.

2.4.5 Building Materials and Sustainability

Initiatives that will be adopted to maximise the sustainability of materials used in the development will include:

- Where feasible, there will be the provision of 20% of all aggregate used for structural purposes to be recycled (Class 1 RCA in accordance with HB155-2002) or slag aggregate; and no natural aggregates are used in non-structural uses (e.g. building base course, sub-grade to any car parks and foot paths, backfilling to service trenches, kerb and gutter).
- Recycled Steel will be selected where feasible.

- The minimisation of PVC use according to the GBCA PVC Best Practice guidelines where feasible.
- Timber will be selected where feasible over the function areas would provide a demonstrable use of timber within the facility and will be considered further.
- Low VOC paints, sealants, flooring and fitout items will be selected where possible.
- Low formaldehyde emission engineered wood products will be selected where possible.

2.5 Solar access

The DP&I requested further information regarding the overshadowing of public domain areas. In particular shadow diagrams at a legible scale are to be provided and should clearly show the extent of any additional overshadowing of the public domain areas in and around of Darling Harbour. Specific evaluation of the extent of additional overshadowing should be provided with regards to:

- the circular garden at the Darling Park development;
- any other public space;
- 222 Sussex Street; and
- 25 Market Street.

2.5.1 Circular Garden

Updated Shadow Diagrams have been prepared by Scharp Design and are included at **Appendix I**. The revised shadow diagrams illustrate that the proposed development will result in some overshadowing of the Circular Garden within the Darling Park site from just after 10:30am in the morning until just before 12.30pm on 21st June. Whilst this is the case it is noted that:

- a) Darling Park is located due south of the application site. It is therefore reasonable to expect that some form of overshadowing will occur as a result of the proposed development.
- b) The extent of overshadowing will only affect a small portion of the north-west corner of the Circular Garden.
- c) The Circular Garden will continue to have partial or full access to sunlight through the entire day, with more than 50% of the garden being in full sunlight from 12:00 noon onwards.
- d) Part of the Circular garden will be in sunlight from 10:00am onwards, with the large majority of overshadowing being caused by the existing northern Darling Park tower.

In light of the above the overshadowing impacts of the proposed development on this area are considered to be acceptable.

2.5.2 Other public spaces

Cockle Bay

The proposed development will result in some overshadowing of Cockle Bay Marina from 9:00am until circa 9:45am on the morning of June 21. This impact is considered to be acceptable as the extent of shadowing is limited to a small amount of time in the morning, with this part of Cockle Bay having full access to sunlight from approximately 10:30am onwards. It is also noted that the pedestrian path along this part of the Cockle Bay is already overshadowed by the Cockle Bay Wharf development. Additional shadowing impact on public pedestrian areas by the proposed development is therefore minimal.

Darling Park - Northern Square

The shadow diagrams submitted with this additional information illustrate that the proposed development will result in overshadowing of the northern square in Darling Park from 12:00 noon until 3:00pm on the 21st June. The shadowing impacts caused as a result of the proposed development are considered to be acceptable as:

- a) Darling Park is located to the immediate south of the application site. It is therefore reasonable to expect that overshadowing of Darling Park will occur as a result of the proposed development.
- b) The Darling Park northern square comprises a pedestrian entrance into the northern Darling Park tower, pedestrian walkways, landscaping and an outdoor seating area serving the existing cafe. The area is therefore considered to be more of a transition space that people use as a means for meeting up as opposed to a genuine public open space (such as a park) that serves recreational and leisure needs.
- c) The area located at the northern end of the Darling Park development is not identified as a significant public space in the City of Sydney.
- d) Inspection of the site during the weekday has confirmed that the area is mainly used for pedestrian circulation to, from and through the site. The majority of people using the space are either entering or exiting the northern Darling Park tower, or are walking to and from Pyrmont Bridge.
- e) The outdoor seating area is a commercial area that is restricted in its use tocafe customers rather than a public open space.
- f) Overshadowing impacts caused by the proposed tower shift from west to east throughout the day. As a result no part of this northern square will be overshadowed by the development for the entire day. Particularly it is highlighted that at its worst (i.e. June 21) the outdoor seating area for the existing cafe is overshadowed by the proposed development between 12:00 noon and 2:00pm, being just two hours of the entire day.

For further details regarding overshadowing of this space refer to the shadow diagrams that accompany this response at **Appendix I**.

2.5.3 222 Sussex Street

Further analysis has been undertaken of the shadowing impacts of the proposed development oo the Astoria Tower apartments. As shown in the shadow diagrams located at **Appendix H** this analysis confirms that on 21st June the proposed development will have a small overshadowing effect on the northern facade of the Astoria Tower, with the northern windows of apartments on Levels 9 – 13 being affected between 2:15pm and 3:15pm. It is noted that each window is only shadowed for no more than 30 minutes. The shadowing impacts of the development on the Astoria Tower are considered to be acceptable.

2.5.4 25 Market Street

As shown in the accompanying shadow diagrams located at **Appendix I**, the proposed development will not result in any overshadowing impacts on 25 Market Street between the hours of 9:00am to 3:00pm, and is therefore considered to be acceptable in this regard.

2.6 Glare

The DP&I required further information be provided about the potential for glare from the large glazed areas on the conference / function area west elevation on

the overpass connecting to King Street and in particular the potential for reflection of the afternoon sun to affect driving conditions, and if identified, how to ameliorate such reflections.

A Solar Light Reflectivity Analysis has been prepared by Windtech Consultants Pty Ltd in response to the concerns raised by the DP&I and is located at **Appendix J**. The analysis was undertaken with consideration of the DGR's and also addressed the planning control requirement set out in Part 3 of the City of Sydney Development Control Plan.

The results of the reflectivity analysis indicate that reflections from the facade of the redevelopment are effectively broken-up by the many external facade features on the podium expansion and the tower component, including external vertical fins, pitched metal roofs, and external sunshade louvres. Nonetheless, to avoid adverse glare impacts on pedestrians, drivers and surrounding buildings the report recommends that the following measures are incorporated within the building design:

- "All glazing used for the external façade of the redevelopment should have a maximum normal specular reflectivity of visible light of 20%.
- Three 40cm high solid screens to be added on top of the glazed roof portion of the western podium expansion. The screens should have a north/south alignment and be located along the front, middle and back of the glazed roof."

With the incorporation of the abovementioned recommendations, the Solar Light Reflectivity Analysis concludes that the proposed development will not cause adverse solar glare to pedestrians or motorists in the surrounding area, or to occupants of neighbouring buildings.

2.7 Wind Impacts

The DP&I required that additional information be provided with regard to wind tunnel effects at higher elevations, especially along Market Street.

A Pedestrian Wind Environment Statement has been prepared by Windtech Consultants Pty Ltd in response to the concerns raised by DP&I and is located at **Appendix K**.

The results of the wind assessment indicate that the trafficable areas within and around the application site will be well shielded from the prevailing north-easterly, southerly and westerly winds that typify Sydney.

The report notes that the wind impacts by the proposed development are expected to be negligible, with very few areas in the immediate vicinity of the site being affected by changing wind conditions as a result of the proposed development. Overall the report concludes that wind conditions within accessible surrounding areas are expected to remain suitable for pedestrian activity.

2.8 Noise

The DP&I requested that further information be provided about the probable time to undertake the construction of the foundation piles adjacent to the northbound and southbound carriageways of the Western Distributor roadway and the likely hours of construction for this part of the work.

Two building contractors were consulted in relation to the programme for piling works, with both of these estimating that it is likely to take between 8-10 weeks depending on agreements with RMS for construction methodology and closure of and access to the Western Distributor.

With regards to noise, while adjacent residential properties are a key consideration in the formulation of construction methodologies to mitigate acoustic and vibration impacts, it is noted that noise impacts are also a primary concern for the applicant as maintaining hotel operations within the site is a high priority.

Works over the Western Distributor will be the subject of a Works Authorisation Deed and detailed noise attenuation methods can only be determined once the construction methodology has been agreed. The construction methodology will be developed in consultation with RMS, traffic and engineering design consultants and the successful contractor.

A number of key principles have informed and will direct the development of methodologies and plant selection in order to minimise noise and vibration impacts on the surrounding area. These are outlined below:

- Particular care will be taken during piling works and demolition within the existing structure, with work methodologies and plant selection informed by the primary objective of minimising impacts from these works on existing or adjacent structures. The main contractor, with its appointed subcontractors, will work collaboratively with the acoustic and vibration consultant to develop strategies that will ensure appropriate methodologies and monitoring techniques are maintained throughout the works.
- The main contractor will implement the following work practices to minimise construction noise and vibration within the prescribed noise and vibration criteria, in particular in relation to ongoing hotel operations and sensitive receivers:
 - Reduce the line-of-sight noise transmission to sensitive receivers using temporary barriers constructed from hoarding (plywood boards, panels of steel sheeting or compressed fibre cement board) with no gaps between the panels at the site boundary.
 - Erect temporary noise barriers before work commences to reduce noise from works as soon as possible.
 - Consult with affected neighbours regarding effectiveness of the noise mitigation measures.
 - Where feasible and reasonable, utilise alternatives to rock-breaking work methods, such as hydraulic splitters for rock and concrete, hydraulic jaw crushers, chemical rock and concrete splitting, and controlled blasting such as penetrating cone fracture.
 - Use alternatives to diesel and petrol engines and pneumatic units, such as hydraulic or electric controlled units where feasible and reasonable. Where required, locate electrical generators away from residences.
 - Select the least noisy machine available, for example rubber wheeled vehicles in lieu of steel.
 - Select super-silenced compressors, silenced jackhammers and damped bits where possible.

2.9 Transport and Accessibility

The DP&I has requested and/or sought clarification on a number of transport and accessibility matters related to the proposed development.

- a) Public Access / through site link
- Additional information is to be provided about how the pedestrian link will be managed, including but not necessarily be limited to:
 - hours of public accessibility (24/7? Hotel opening hours? Other?)
 - how the pre-function area adjacent to the through site link will be managed

- accessibility options regarding the stairs
- Design options are to be investigated for improving the ceiling height, width and quality of this link space. This is to include investigations into the possibility of extending the glazing looking out over the freeway for the full width, providing higher ceiling heights along the link by cutting into the mezzanine level storage area above (if feasible), widening the opening of the link at the reception desk pinch-point and considering the floor level of the link to streamline movement. Options are also to include a fully accessible through site link either at RL 10.1 or with internal ramping to RL 11.5, and including a lift at the western stairs.
- b) Hotel Access
- Further information is to be provided about how access for disabled people is achieved from the hotel reception to the proposed hotel tower and from the proposed hotel tower lifts to Sussex Street.
- c) Port Cochere
- Additional information is to be provided about how the port cochere on Sussex St is intended to operate. This is to include details on any design elements proposed to manage potential vehicle and pedestrian conflict to ensure that the area functions safely as a shared zone, particularly in relation to the through site link and its indicative paving.
- d) Pedestrian connection
- Provide concept design options to connect to the Market Street/Pyrmont Bridge walkway to test the feasibility of establishing a pedestrian connection following the decommissioning of the monorail. Options should include a design concept for an access ramp connecting the former Pyrmont Bridge abutment adjacent to the southern end of the Corn Exchange to the Darling Park bridge following the curved alignment of the Market Street off-ramp (below). Provide an estimate for the cost of these options.
- Provide further information about what improvements can be made to the pedestrian island arrangements at the intersection of Market and Sussex Street in order to accommodate increased pedestrian movements to and from the site and improve the intersection safety for pedestrians including a proposed plan of potential revisions.
- e) Bicycles
- Design options are to be provided to demonstrate how the proposed development can fully comply with the *Draft City of Sydney Development Control Plan 2010 Section 2.15.3 Bike parking and associated facilities* for both the proposed new development and the existing development. Highlight existing (if any) and new areas of bicycle storage and end of trip facilities.

2.9.1 Hotel Access and Through Site Link

The proposed through site link has been designed to be a generous and well defined walkway that provides a direct and inviting connection between the porte cochere at Sussex Street and the existing pedestrian stair to the west at Wheat Road.

The through site link will be clearly defined by signage, floor finishes and lighting that together will highlight the link and compliment the adjacent hotel lobby public area finishes. Public access through the link will be provided between 7am and 10pm, with external doors at the western end of the link limiting access outside these to hotel customers via a swipe card system. An intercom system will also be placed at the door allowing people to communicate with hotel staff in the event

of an emergency. Similarly after-hours access at the eastern Sussex Street end will also be restricted to hotel customers via a swipe card system.

To ensure the creation of a welcoming and airy space the ceiling height of the meeting room level has been raised by 500mm to 3100mm clear to the underside of the beams and 3400mm clear between beams. The width of the link has also been increased to an average of 4.8m, with the eastern Sussex Street end being slightly narrower and fanning out as it moves towards Darling Harbour.

Glazing is proposed across the majority of the link's external southern wall allowing for expansive views across the Western Distributor to Pyrmont Bridge and Cockle Bay. The use of glazing will also provide abundant natural light and maximise the sense of amenity and safety.

The through site link is split into two sections by a single short set of stairs incorporated into the design to account for the 1450mm level change between the Sussex Street and Wheat Street stairs. A lift providing an accessible path is located within the hotel lobby, ensuring an accessible route is provided between the hotel and through site link, whilst also providing access between the lobby and the new hotel component (refer **Figure 8** and **Appendix C**). It is noted that an alternative option was considered involving a 20m long ramp to accommodate the 1.450m level change. Whilst considered a preferred design solution for hotel patron access, the constraints imposed by the location of the existing hotel lift cores prohibits a ramp solution from working within this part of the building.



Figure 8 – Accessible route between existing and proposed development (Source: Cox Richardson Architects)

Investigations were also undertaken into the possibility of a lift being provided at the western Wheat Street end of the link adjacent to the existing stairs, however these investigation concluded that a lift could not be accommodated due to the location of the King Street overpass and the constrained footprint available (refer **Figure 9**).



Figure 9 – Through site link landing area between Wheat Road and King Street overpass (Source: Cox Richardson Architects)

The pre-function area has been redesigned so that it is now located at the northern end of the building and therefore no longer shares an integrated and 'open door' interface with the through site link. This revised design allows for the clear distinction and separation of these spaces and supports a more straightforward management approach to the area. A connection from the conference facility to the through site link will still be available via a door or through the lobby. Management of this interface will be possible by locking and opening the door when required.

2.9.2 Port Cochere

A separate statement regarding traffic and access matters has been prepared by Colston Budd Hunt & Kafes Pty Ltd and is provided at **Appendix L**. This statement identifies a number of specific management measures that will be implemented by the hotel to control the operation of the porte cochere, including:

- Porte cochere will be managed and controlled by hotel personnel, who will be responsible for assisting guests/delegates in and out of waiting vehicles, transferring luggage, and managing the movement and flow of vehicles through the facility.
- The length of stay of vehicles within the porte cochere will be restricted to 5 minutes. Vehicles standing within the porte cochere for more than 5 minutes will be instructed to move on.
- Taxis and hire cars will not be permitted to stand within the porte cochere.
- Implementation of a hotel valet system to transfer hotel guest vehicles from the porte cochere to the Secure car park located on the eastern side of Sussex Street.
- Implementation of a policy that prohibits service vehicle deliveries from delivering goods via the porte cochere, including signs located at the entrance to the porte cochere preventing access by service vehicles. All service vehicle deliveries will occur via the hotel loading docks off Slip Street.
- For major functions at the hotel, visitors and guests arriving and leaving by taxi/hire car will be set down and picked up from the lower ground floor reception area off Slip Street. During these periods the lower reception area will be staffed and managed by hotel personnel.

With regards to pedestrian access, the porte cochere will incorporate pedestrian connections between the main hotel entrance and Sussex Street, with pedestrian footpaths around the porte cochere being approximately 2.5m to 4.5m wide.

Potential vehicle and pedestrian conflict within the porte cochere will be managed through the inclusion of bollards and different paving treatment that will both physically delineate and visually separate these spaces. The porte cochere will also include signage and has been designed to maximise sight lines in order to ensure maximum pedestrian safety.

Overall the design, operational and management arrangements of the porte cochere area are considered to be appropriate.

2.9.3 Market Street / Pyrmont Bridge Walkway

In accordance with the DP&I request, investigations have been undertaken to test the feasibility of establishing a pedestrian connection from the southern end of the Corn Exchange to the Darling Park bridge.

Survey data for the site and its surrounds confirms that the level change between the pedestrian path at the southern end of the Corn Exchange (RL9.280) and Darling Park bridge (RL16.64) is 7.36m. As illustrated in Figure 10 below the ground level footprint that is capable of accommodating an overhead structure is limited to the traffic islands between Slip Street, Western Distributor southbound and Western Distributor northbound. This subsequently limits the possible construction options.



Figure 10 - Indicative plan showing possible structural support locations

The island between Slip Street and the Western Distributor is of a dimension that could accommodate a lift structure (subject to in-ground services analysis) and is likely to be accessible for construction purposes. The traffic island land area is owned by the Sydney Harbour Foreshore Authority.

From a theoretical design point, a lift structure could be located on this island with a stair spanning from the pedestrian footway at the southern edge of the Corn

Exchange onto the lift structure. An elevated bridge would then connect the stair and lift landing area with the Darling Walk bridge supported by a column onto the Market Street overpass structure below. This design option is shown in **Figures 11** and **12** below.



Figure 11 – Diagram showing potential walkway, stair and lift location (Source: Cox Richardson Architects)



Figure 12 – Diagram showing potential walkway, stair and lift location (Source: Cox Richardson Architects)

Feasibility of the above configuration is however subject to undertaking detailed analysis of in-ground services locations and the structural capacity of the Market Street overpass to support the column at the junction with Darling Walk bridge. Initial investigation by our structural engineers (Aurecon) has confirmed that the Darling Walk bridge structure would not have sufficient load bearing capacity to support the new bridge connection at the mid span position. In addition to the structural difficulties in making such a proposal work, the proposed structure is also likely to have a visual impact on the Corn Exchange given its proximity to the building. Its location at the termination point of Market Street will also be likely to interrupt sight lines and clutter views to Pyrmont Bridge and Darling Harbour.

From an operational point of view, given the relative generosity and ease provided by the existing pedestrian connection to Pyrmont Bridge on the south side of Market Street together with the significant height to be negotiated in the proposal above, pedestrian preference is likely to continue to be for the existing connection even in the event of a new connection being provided.

It should also be noted that Sussex Street north of Market Street generates very low pedestrian volumes with the vast majority of pedestrian journeys to Darling Harbour originating in the CBD east from Market Street. Similarly pedestrians leaving Darling Harbour via Pyrmont Bridge and Darling Park south are primarily looking to travel along Market Street into central CBD areas. The existing connection therefore provides a safe, convenient and accessible route to facilitate the bulk of pedestrian movements, whereas the proposed new connection will require pedestrians to make a further unnecessary crossing of Sussex Street.

WT Partnership has provided preliminary costings on the above proposal totalling \$4.5 million. Their cost estimate together with the diagrams of the possible connection is located at **Appendix M**.

In summary, a pedestrian link between the site and Pyrmont Bridge is considered unnecessary and undesirable as:

- a) The proposed connection is technically difficult and expensive from a structural and design point of view and may not be feasible.
- b) The existing pedestrian link connecting Market Street to Pyrmont Bridge will continue to be the preferred access route given the relative generosity and ease of the connection.
- c) The large majority of pedestrian movements originate from the CBD to Darling Harbour via Pyrmont Bridge and vice-versa. The existing connection provides a safe, convenient and accessible route that meets these needs.
- d) Sussex Street north of Market Street generates very low pedestrian volumes and the proposed hotel is not considered to generate the sufficient additional demand to warrant the need for such a link to be provided.
- e) A new and improved pedestrian link (i.e. Wharf Lane) will be provided through the site as part of the proposed works and will facilitate uninterrupted pedestrian access from Sussex Street through the site to Darling Harbour.
- f) The proposed link represents a substantial and unnecessary cost to the development with no established nexus.

2.9.4 Pedestrian Connections

A detailed response to this matter is provided in the accompanying statement prepared by Colston Budd Hunt & Kafes Pty Ltd and located at **Appendix L**. in summary it is noted that:

- The existing signalised intersection of Market Street and Sussex Street incorporates two small pedestrian islands across the northern approach to the intersection.
- Based on observations, RMS could give consideration to improving the pedestrian facilities at the intersection by removing the two islands and providing a single pedestrian crossing across Sussex Street north of Market Street.

- Such an approach would improve pedestrian safety at the intersection and provide greater pedestrian storage and waiting area adjacent to the signal.
- The operation of the intersection, incorporating a single pedestrian crossing across Sussex Street north of Market Street, has been assessed using the SIDRA program, with the existing and additional development traffic in place. The SIDRA analysis found that the intersection would continue to operate a level of service B/C, which is a satisfactory level of intersection operation.

2.9.5 Bicycles

To support accessibility by bicycles, bicycle parking is now proposed to be provided at Lower Ground Level at the site's north-east corner adjacent to Slip Lane.

With regards to end-trip facilities, the existing hotel provides change rooms and amenities for hotel staff. These facilities will be upgraded as part of the proposed redevelopment and will be available to all staff, including those cycling to work. End-trip facilities for the commercial development will be provided on Level 15 of the commercial building.

For further details refer to the Architectural Plans (Appendix B) and the statement prepared by Colston Budd Hunt & Kafes Pty Ltd (Appendix L).

2.10 Other Matters

2.10.1 Issue

The following requests were also made by the DP&I with regards to the proposed development:

- g) Provide land owner permission for works being done outside the site boundary shown on the plans including on the ground level (tree removal) and on the through site link stairs and new awning (west side).
- h) Provide a plan of the location of the CBD Rail Link in relation to the land.
- i) Provide a plan of the proposed Haymarket to Circular Quay light rail corridor.

2.10.2 Proponent's Response

j) Land Owner Permission

Land owner's permission is currently being sought with regard to works outside the site boundary and will be provided to the DP&I once obtained.

k) CBD Rail Link

The attached plans prepared by Cox Richardson Architects and included at **Appendix N** illustrate the location of the CBD Rail Link in relation to the site and the proposed development.

I) Light Rail Corridor

The attached plans prepared by Cox Richardson Architects and included at **Appendix N** illustrate the proposed location of the Haymarket to Circular Quay light rail corridor in relation to the site and the proposed development.

3.0 State Authority and Agency Issues

As highlighted earlier in this report ten submissions were received from nine government agencies and authorities in response to the State Significant Development Application. Specifically responses were received from:

- City of Sydney Council;
- Sydney Harbour Foreshore Authority;
- Heritage Council of NSW;
- Office of Environment and Heritage;
- Roads and Maritime Services;
- NSW Environmental Protection Authority;
- NSW Office of Water;
- Department of Primary Industries; and
- Ausgrid.

It is noted that responses from Ausgrid, Office of Environment and Heritage, the Environmental Protection Authority, and the Sydney Harbour Foreshore Authority raised no objections and had no issues or comments with regards to the proposed development.

The other agencies and authorities made a variety of comments and sought further clarification and information on a number of matters. A detailed response to these submissions is set out in the table contained in **Appendix A**.

4.0 Other Stakeholders

4.1 Commercial Property Owners

Three submissions were received from commercial property owners in response to public exhibition of the SSD application: the owners and managers of buildings at 2 Market Street (Allianz Building): 383 Kent Street; and the Darling Park Towers.

Together these submissions raised a variety of issues including visual impact, loss of views, design of the proposed tower, building height and mass, impacts on the adjacent heritage listed buildings and overshadowing. A detailed response to these submissions is set out in the table contained in **Appendix A**.

4.2 Residents

JBA has analysed the residential submissions received in response to the public exhibition, as summarised below and in **Table 1**.

- A total of 105 residential submissions were received. 104 submissions objected to the development and one was neutral.
- 34 of the submissions were received from the Astoria Apartments at 222 Sussex Street. The majority were 'tick the box' pro-forma submissions.
- 69 of the submissions were received from the Berkeley Building at 25 Market Street. The majority of these were 'tick the box' pro-forma submissions.
- Two forms of pro-forma submissions came from the Berkeley Building. Both covered the same issues as identified in the Astoria, with the second proforma also addressing a further set of issues.

Detailed responses to the matters raised in these submission is provided in the Table of Responses at **Appendix A**.

5.0 Summary of Changes to the Proposed Development

In response to the issues and concerns raised by the DP&I, other government agencies, third party commercial stakeholders and residents. A number of changes have been made to the proposed development in response to these concerns and these changes are listed in the **Table 1** below and shown on the revised Architectural Plans prepared by Cox Richardson Architects (**Appendix B**).

Plan Plan Name Detailed Design Changes					
Number		Detailed Design Changes			
A-DA- 0200	Lower Ground Level Floor Plan	 36 wall mounted bike racks to Slip Street (17 x 5) wall mounted bike racks & (17x5) lockers to the north of the site (existing store room) A new goods lift has been added to the north of existing good lift to service Lower Ground, Mezzanine and Level 1. 			
A-DA- 0201	Ground Level Floor Plan	 The northern and southern facade of the convention building component has been realigned. The western facade of the convention building component has been redesigned. Building structure has been reviewed. Tower podium has been cutback to open up views to the Corn Exchange. External Stair to east of commercial foyer has been removed. Eastern and southern truss of tower relocated to external facade. Internal configuration of the tower and convention centre has been redesigned to accommodate proposed changes to the building form. Wharf Lane bridge has been comprehensively redesigned to be more sympathetic to the site heritage qualities. Design of through site link has been amended. Alignment of escalator in hotel foyer void has been amended. Reception has been re-oriented to be parallel to through site link. Inclusion of cloak room and bag room to north of hotel foyer. A new northern goods lift is now provided. Internal configuration of the all-day dining and kitchen area has been amended. Escalator to LM extended to ground level Inclusion of Store and Accessible WC below Stair & Escalator circulation 			
A-DA- 0202	Mezzanine Level Floor Plan	 Floor level of Convention Area increased by 500mm. From RL 15.100 to RL 15.600. Circulation adjusted to accommodate level change with the inclusion of both ramps and stair to the north and south of the site. The western facade of the convention building 			

Table 1 – Schedule of Design Changes

		 component has been redesigned. Structure reviewed. Podium extent cutback to open up views to Corn Exchange. Removal of external stair to east of Commercial foyer. Eastern and Southern truss of tower relocated to external facade. Internal configuration of the tower and convention centre has been redesigned to accommodate proposed changes to the building form. Skylight voids have been added in both pre- function spaces. Widening of service corridor to the south and inclusion of chair storage with ease of access to function room. Internal planning in tower has been amended to accommodate fire egress corridors. New northern goods lift is now provided. 	
		 Re-alignment of escalator and lift from lower ground. 	
A-DA- 0203	Level 1 Floor Plan	 New goods lift over-run and additional storage space in lieu of existing hotel rooms (153 & 155). Skylights in pre-function spaces Internal bridge to outdoor terrace within void of southern pre-function space. Green Edge to outdoor Terrace above pre-function. Existing hotel rooms (102, 105 & 106) converted to Gym. Additional Hotel suite (1) in New Tower. 	
A-DA- 0204	Level 2 Floor Plan	 Additional Hotel suite (1) in New Tower. New goods lift over-run and additional storage space in lieu of existing hotel rooms. (216, 218, 253 & 255) Existing Hotel - EIS shown store rooms converted back to existing hotel rooms. (210, 212, 214, 220, 222 & 224) 	
A-DA- 0205	Level 3 Floor Plan	 Additional Hotel suite (1) in Tower. 	
A-DA- 0208	Level 15 – Plant Room Level Floor Plan	 Change-room and lockers facilities for the commercial tenancy (to Comply with DCP requirements) 	
	-		