



Sydney Office

Level 9, 17 York Street, GPO Box 4401, Sydney NSW Australia 2001

T +61 2 8270 8300 F +61 2 8270 8399 E sydney@rpsgroup.com.au W rpsgroup.com.au

Our Ref: PR115191-1
Your Ref: SSD-4972
Date: 26 October 2012

Attn: David Rohloff

Department of Planning & Infrastructure
23-33 Bridge Street
GPO Box 39
SYDNEY NSW 2011

Via: Online via Department of Planning & Infrastructure website

Dear David

**RE: SUBMISSION TO DEVELOPMENT APPLICATION (REF: SSD-4972)
FOUR POINTS BY SHERATON HOTEL EXPANSION
161 SUSSEX STREET, SYDNEY**

Introduction

We act on behalf of the landowners of 2 Market Street, Sydney and provide this submission in response to a development application lodged over land located at 161 Sussex Street, Sydney (the site).

The development application (Ref: **SSD-4972**) is currently on exhibition until Friday 26 October 2012. The proposal comprises the construction of a 25 storey tower at the southern end of the site which will include 231 new hotel rooms on levels 1 to 14, seven storeys of new commercial office space on levels 16 to 22 and two plant levels.

RPS has undertaken a review of the development application documentation in relation to the potential impacts the proposal may have on the current and future tenants of 2 Market Street. In preparing this submission, expert advice was sought in relation to the following:

- Architectural Assessment of Building Impact, prepared by Crone Partners;
- Review of Heritage Impact Assessment, prepared by RPS; and
- Review of Traffic and Parking Implications, prepared by GTA Consultants.

These reports are attached and form part of this submission.

It is noted our Client is not opposed to development of the site, however there are a number of issues which have been identified with the current proposal that are of concern to them. One of the main concerns is the scale of the proposal and the impacts this will have on the interface between the Sydney CBD and Darling Harbour, as well as direct impacts to their property at 2 Market Street.

This submission discusses the range of issues and concerns identified with the proposal in its current form, and which should be addressed by the proponent.

Overview of Submission

The following table provides a summary of the issues identified during the review of the development application that form the basis for this submission. These issues are addressed in more detail throughout this document and in the attached reports.

Table 1 Summary of issues

Submission Item	Key Issue
Building bulk and scale	<ul style="list-style-type: none"> ▪ Bulk and Scale <ul style="list-style-type: none"> - A portion of the building has a horizontal dimension of 105m with a building height of 56m or more. - The tower is not set back from its Market Street boundary contributing to its overall length and excessive bulk. ▪ Height <ul style="list-style-type: none"> - The tower does not acknowledge and reinforce the reduction in scale from the George Street ridge of the CBD. - The height of the tower does not allow for view sharing of Darling Harbour from buildings on the edge of Central Sydney. - The height of the tower at RL93.6m is out of context with the existing buildings on site which rise to a maximum of RL65m. ▪ Consistency with built form and planning controls <ul style="list-style-type: none"> - While not directly applicable to the site, the City of Sydney planning controls determine the surrounding built form and provide an appropriate basis for a merits based assessment of the development. The proposal is significantly inconsistent with these controls and the surrounding built form.
View loss & impact on amenity	<ul style="list-style-type: none"> ▪ Amenity <ul style="list-style-type: none"> - Impacts of the excessive tower height, inadequate setbacks and lack of separation will have a significant effect on the amenity of workers in neighbouring buildings. ▪ Views and Vistas <ul style="list-style-type: none"> - Market Street is a significant public vista to Darling Harbour which will be reduced by about 31% as a result of the tower. ▪ Overshadowing <ul style="list-style-type: none"> - The tower introduces significant overshadowing to the Darling Harbour waterfront pedestrian area during the morning throughout the year. ▪ Visual Impact Assessment <ul style="list-style-type: none"> - Does not adequately consider impacts of the proposal, particularly on iconic views to Centrepont and Darling Harbour.
Key design issues	<ul style="list-style-type: none"> ▪ The proposal does not contribute to the layering of built form from Darling Harbour up to the centre of the CBD when viewed from the west. ▪ The floorplate is oversized and bulky, pushed to the boundary with disparate façade treatments, providing no genuine relationship to the existing building, not attempting to acknowledge the amenity of the buildings immediately behind. ▪ the proposed tower is significantly forward of Darling Park Tower 1 and of significantly different scale making the framing of Market Street questionable.
Heritage impact	<ul style="list-style-type: none"> ▪ Built Heritage <ul style="list-style-type: none"> - The proposed tower will significantly impact on the heritage significance of the Corn Exchange with respect to its wider visual setting and its prominence in established local views ▪ Archaeology <ul style="list-style-type: none"> - Inadequate reporting was undertaken with respect to the Heritage Impact Statement.

Traffic impact	<ul style="list-style-type: none"> ▪ Traffic & Road Network
	<ul style="list-style-type: none"> - Traffic analysis relating to the existing and future traffic conditions of the surrounding road network were understated in the Transport and Accessibility Impact Assessment Report. It is recommended that an investigation be undertaken to clarify both the existing and future traffic conditions of the surrounding road network.

Key Issues

1. Consistency with surrounding built form and adjacent planning controls

While the site is located within the City of Sydney local government area, it is included in the Darling Harbour State Significant Development Site of the *State Environmental Planning Policy (State and Regional Development) 2011*. The relevant planning control is the Darling Harbour Development Plan No 1 (DHDP).

The DHDP is a performance based control providing objectives for development of land to which it applies. It does not provide any prescriptive planning controls.

The planning controls that apply to the land surrounding the site help define appropriate built form in the area. These planning controls will shape the built form of the areas surrounding the site, which is an important and reasonable consideration in any merits based assessment undertaken for the proposal.

The current proposal is inconsistent with the surrounding planning controls and resulting built form, as discussed further below.

Building height

Land located to the north of King Street and east of Sussex Street is located within the *Sydney Local Environmental Plan 2005* (LEP). The *Draft Sydney Local Environmental Plan 2011* (Draft LEP) also applies to this land. Land located to the south of the site, on the southern side of Market Street is also located within the DHDP.

Height controls for surrounding land is provided in the table below.

	LEP	Draft LEP	Proposal
Height	North of King Street: RL28.6m	North of King Street: RL28.6m	RL93.6m
	East of Sussex Street: 80m	East of Sussex Street: 80m	(approx. 83.6m at Sussex Street
	South of Druitt Street: 45m	South of Druitt Street: 45m	eastern elevation)

Part 3 Section 47 of the LEP also provides objectives for the control of the height of buildings in Central Sydney. The following list provides reasonable objectives that landowners could expect the development of the site to be assessed against.

- (a) to allow sunlight access to key areas of the public domain by ensuring that:
 - (i) further overshadowing of certain parks and community places is avoided or limited during nominated times,
 - (b) to provide a transition of building heights between localities and street blocks, and
 - (g) to ensure that tower development occurs on sites capable of providing appropriate urban form and amenity, and
 - (i) to provide for view sharing along the edges of Central Sydney.

It is apparent that the intent of the City of Sydney is for development on land located to the west of Sussex Street is to be reduced in height and scale as the land approaches Darling Harbour, stepping away from the George Street ridgeline of the CBD. The proposed development in its current form does not do this.

Existing height plane

The existing established height plane of this part of the CBD creates a clearly defined form stepping down from George Street to Darling Harbour.

The height of the proposed tower is RL93.6m. The building located at 2 Market Street to the east of Sussex Street is approximately RL95m which will provide a transition in height of 1.4m. This transition in height will prohibit any view sharing from this location along the edge of Central Sydney.

The northern 10 storey hotel tower rises to RL47.9m and at 16 storeys, the southern tower rises to RL65m.

Currently, there is a transition of 30m between the southern tower on the site and the building located at 2 Market Street. This transition between the height of the buildings conforms to the intent for development in Central Sydney providing a transition between building heights and providing for view sharing along the edges of Central Sydney.

The reduction in height of buildings as they step away from the ridge is demonstrated in the image below prepared by Crone Partners.

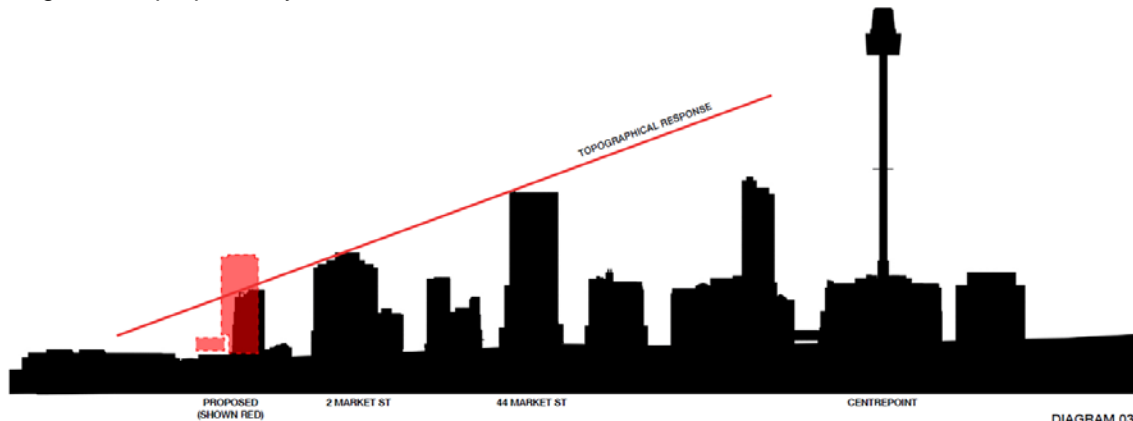


Figure: Graded height controls of the CBD demonstrating the height of the existing and proposed buildings.
Source: Crone Partners.

As is demonstrated in the image below, the height plane of the city skyline steps down in height as the buildings get closer to Darling Harbour. The figure demonstrates the inconsistency between the height plane of the CBD and the proposed tower.

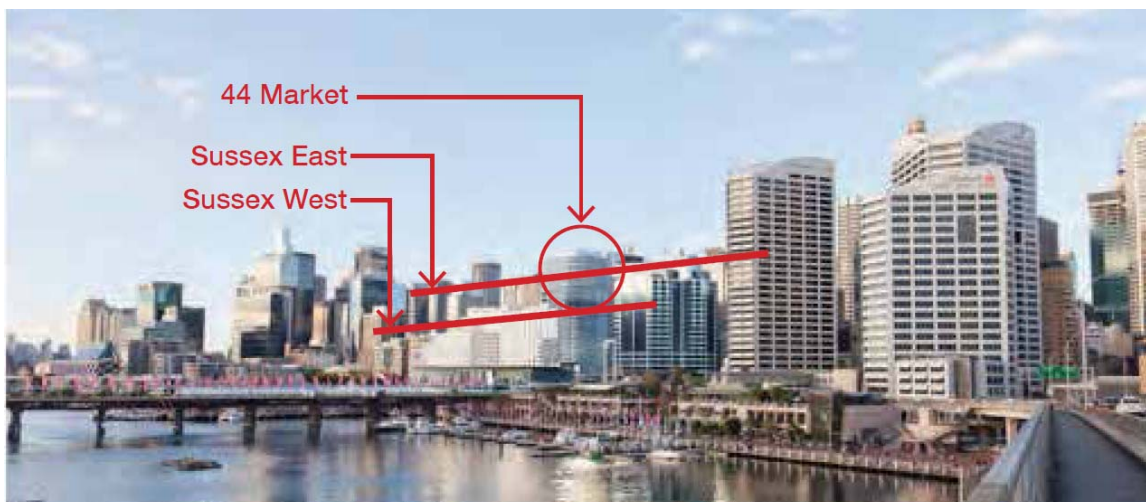


Figure: Looking north east from the Freeway demonstrating the clear transition in building height towards Darling Harbour in comparison to the height of the proposed tower.
Source: Crone Partners.

The figures below demonstrate an immediate view of the development from the Pyrmont Bridge looking east. The montage demonstrates how the development of the tower contradicts the height plane of the CBD. The development of this corner site should be restricted to a height that takes into account the existing height plane of the CBD. The existing height of the buildings on site sets a strong precedent for any new development being restricted to a maximum of 55m.



Figure: Looking east from the Pyrmont Bridge.
Source: Crone Partners



Figure: Looking east from Pyrmont Bridge demonstrating the impact of the proposed tower contradicting the height plane of the CBD.
Source: Crone Partners.

2. Overshadowing to areas of open space

The solar study prepared by Cox Richardson identifies that the proposal will result in significant overshadowing over Darling Harbour to the south east on June 21 at 9am and west on December 21 at 9am. The study demonstrates the proposal will overshadow the Darling Harbour waterfront pedestrian area during the morning throughout the year (refer below).



Figure: Solar Study June 21 9am.
Source: Cox Richardson.



Figure: Solar Study December 21 9am.
Source: Cox Richardson.

Darling Harbour is an important Sydney icon. The level of overshadowing that would be caused by the proposed development in its current form in this area is considered unreasonable.

For parks and community places, the City of Sydney sets out sun access planes to ensure new development of tall buildings in Central Sydney do not cause additional overshadowing during specified times. The LEP identifies places where no additional overshadowing is to occur, including iconic public areas such as Martin Place and Pitt Street Mall.

Provisions such as these demonstrate the commitment of the local government to preserve the amenity of community places, and in particular iconic public areas such as Darling Harbour.

3. View loss and impact on amenity

In order to demonstrate the impacts of the proposed development on the loss of views and amenity to the building at 2 Market Street, Crone Partners have undertaken a review of GMU's Visual Impact Assessment which has raised the following key issues with the assessment. Refer to the assessment located at **Attachment 1**.

Private Views

Only private residential views were considered in the Visual Impact Assessment with no consideration given to employees of nearby buildings such as 2 Market Street due to the loss of amenity. Given the quantum of daylight hours spent at the workplace, the loss of views from this building as a result of the proposed development is a serious consideration that has been overlooked in the design of the proposal.

Key Visual Objectives

Clause 26(a) of the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 states:

development should maintain, protect and enhance views (including night views) to and from Sydney Harbour

Crone Partners have found there is serious loss of amenity to 2 Market Street and little attempt to follow basic design principles that would result not only in greater shared amenity but an improved urban design outcome.

Crone Partners have undertaken a review of a series of view impact assessments undertaken by GMU. While GMU have found there to be 'No Impact' or 'High but acceptable impact' to these particular views recommending no mitigation measures, the review undertaken by Crone Partners has found the impact of the development on the majority of these views to be 'High Impact'. Accordingly, Crone Partners have made the following recommendations to mitigate the impacts of the development on key views:

- Reduce the height of the building so as not to disassociate itself from the development behind it, contrary to the topography.
- Introduce building separation from the hotel to avoid excessive length and height;
- Set back the building from the southern boundary to maintain the key aspects of Darling Harbour and its unique and iconic features when viewed from Market Street.

Following a detailed review of GMU's View Impact Assessment, Crone Partners have identified a number of issues with key aspects of the report. Notably, Crone Partners conclude:

- *There are numerous negative public domain view impacts.*
- *The proposed tower does not follow the topography or form part of the existing built form and scale of the CBD.*
- *Substantial adverse impacts to the amenity and views of workers, most notably in 2 Market Street has been entirely overlooked.*
- *The excesses of the proposed tower and planning controls generally cannot be justified on the basis that they might screen another building considered less appealing. In reality the tower could be 9 storeys lower and still act as a screen. This would not impact the Hotel expansion.*
- *As demonstrated, the proposal does impact iconic views to Centrepont and Darling Harbour itself.*

In order to properly assess the impacts of the proposed development on the building at 2 Market Street, Crone Partners have developed a 3D massing model of the proposed tower, superimposed onto photographs taken from the building at 2 Market Street. Please refer to the photographs located below and at **Attachment 1**.

The photographs demonstrate the significant impacts the tower will have on the existing Allianz commercial office building at 2 Market Street.



Figure: Current view looking west from Level 10.
Source: Crone Partners.



Figure: Proposed view looking west from Level 10.
Source: Crone Partners.



Figure: Current view looking west from Level 15.
Source: Crone Partners



Figure: Proposed view looking west from Level 15.
Source: Crone Partners



Figure: Current view looking west from Level 20.
Source: Crone Partners



Figure: Proposed view looking west from Level 20.
Source: Crone Partners



Figure: Current view looking west from Level 24.
Source: Crone Partners



Figure: Proposed view looking west from Level 24.
Source: Crone Partners

4. Analysis of architectural design

Crone Partners have undertaken an Architectural Assessment of Building Impact, located at **Attachment 1**. The assessment examines the physical and visual impact of the proposed development on the public domain and immediate neighbours.

The assessment focuses on the Design Statement prepared by Cox Richardson. Issues raised in the assessment are outlined below.

- **Scale and Massing**

The proposal does not contribute to the layering of built form from Darling Harbour up to the centre of the CBD when viewed from the west.

The floor plate combined with the height of the proposed building results in excessive massing. The Typical Hotel Floor Plan (drawing reference: DWG 0206 L04-L10) demonstrates an *excessive uninterrupted hotel building length for the block of 175m*.

This is demonstrated in the figure below.

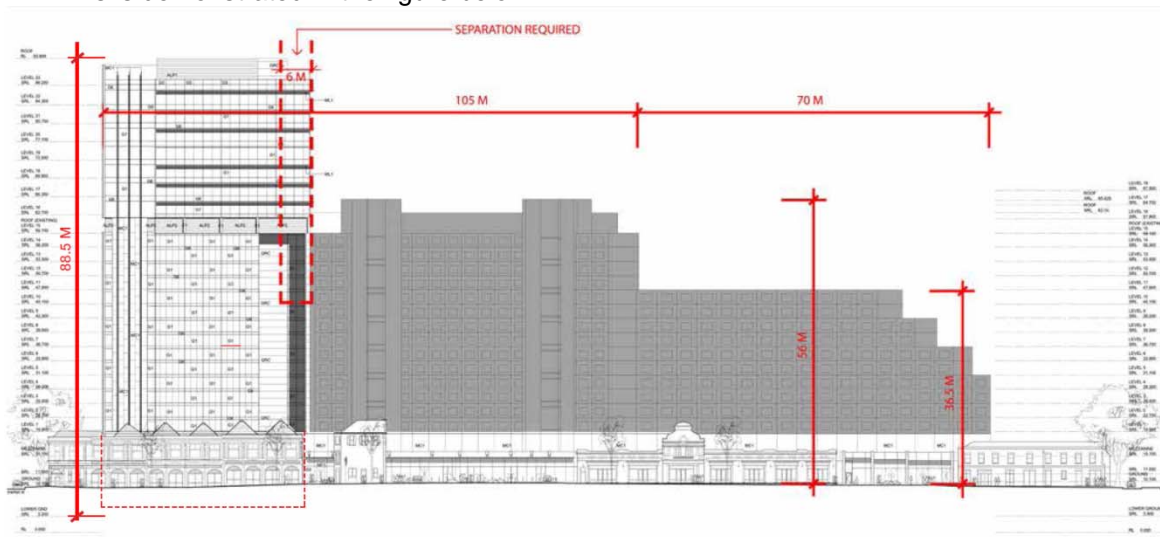


Figure: East Elevation demonstrating the length contributing to the excessive building mass and scale.
Source: Cox Richardson marked up by Crone Partners.

- **Address Corner Condition**

The Design Justification claims the *orientation of the tower maximises hotel rooms with vistas over Darling Harbour and minimises rooms with vistas over Sussex Street*.

The outcome, according to Crone Partners, is an oversized bulky floorplate, pushed to the boundary with disparate façade treatments, providing no genuine relationship to the existing building, not attempting to acknowledge the amenity of the buildings immediately behind.

- **Frame Market Street Vista**

The Design Justification states *the built form of the proposed tower references the triangular plan form of the adjacent Darling Park towers.*

Crone Partners found the proposed tower to be rectilinear, commenting the corner photomontages submitted are highly distorted and do not represent the fact that these corners are 90 degrees.

Rather than framing the vista, the proposed tower reduces the Market Street vista by about 31%. Crone Partners find the framing of the vista to be questionable on the basis the proposed tower is significantly forward of Darling Part Tower 1 and of significantly different scale.

- **CBD Gateway**

The Design Justification states *the proposed tower has a significant urban design role to play within the context of Darling Harbour and the Pyrmont Bridge in enunciating the connection with the entry to the CBD street grid.*

Crone Partners find it to be unlikely that the tower will contribute to a gateway perception given the location of the proposed tower, remote from the true commencement of Market Street, off grid and out of alignment.

The proposed tower is seeking to achieve the gateway concept with 2 buildings of vastly different scale, spread well apart and not appropriately aligned in relation to the Pyrmont Bridge axis.

- **Separate Identity to the Four Points by Sheraton Hotel**

The Design Justification states *the tower provides a separate identity which reduces the perceived scale of the development to a grain similar to that east of Sussex Street which is considered positive.*

Ordinarily, a separate identity would break down the presence of a building. However in this scenario, Crone Partners find the suggestion that the tower form proposed as opposed to something of lesser height will somehow reduce perceived scale is illogical.

5. Heritage Impact

In order to demonstrate the likely impacts of the proposed development on the heritage items located on site, RPS have undertaken an assessment of the impacts to the heritage significance of the items. Refer to a copy of the assessment located at **Attachment 2**.

A review of relevant documentation was undertaken focussing on the Heritage Impact Statement & Archaeological Assessment (HIS) by City Plan Heritage.

With regard to the likely impact of the proposal on the setting of the Corn Exchange, the proposed tower will have a significant impact on its immediate and wider visual setting as a result of its starkly contrasting scale, form and materials. It is considered that this will in turn impact upon the heritage significance of the building.

It is considered that the visual curtilage or setting of the Corn Exchange will be substantially altered as a result of the proposed 25 storey tower. This is a significant heritage impact which is understated in the HIS. This impact on the building's visual curtilage was considered by looking at the results of the Visual Impact Assessment (prepared by GMU) and in particular, the likely impact of the development on immediate views which feature the Corn Exchange from the east and west.

The HIS considers that the screening of the Corn Exchange by the proposed tower in views from Pyrmont Bridge to the west is the only heritage impact of the proposal. The impact of which is described in the HIS as being acceptable because current views are 'secondary'; already

compromised by existing vegetation and the monorail; and, that realignment of the tower would only achieve a marginal increase in the view corridor.

Based on our review, however, the loss of the Corn Exchange's prominence in views from the west is considered to be a negative heritage impact of the proposed development.

It is considered that the local streetscape views of the Corn Exchange from the east will be significantly impacted as a result of the proposed tower and that this constitutes an adverse heritage impact. The prominence of the Corn Exchange in the view will be diminished because it will no longer be read as the main feature at the corner. In turn, the immediate visual setting will be changed irrevocably.

The study area is situated on the Cockle Bay Archaeological Precinct, which is listed on the Sydney Harbour Foreshore Authority Section 170 Register. The Precinct is deemed significant for the archaeological potential still extant, and is important for the information it may reveal about industrial and technological advances over almost a two hundred year period.

The HIS clearly demonstrates the spatial and temporal extent of development on the property, yet discounts the possibility of any *in situ* archaeology on the site based on the assumption that it has been destroyed by subsequent development. This is considered to be an inaccurate interpretation of the impact that the development will have on the subject area. Borehole data in the geotechnical report identifies the presence of fill across the site and the presence of historical material in the fill which may indicate *in situ* deposits.

It is considered that the construction of a 25 storey tower directly behind the State Heritage Registered Corn Exchange Building will significantly impact on the heritage significance of the building with respect to its wider visual setting and its prominence in established local views. These impacts are considered to be adverse or negative, which is inconsistent with the findings of the HIS.

RPS is of the opinion the site located at 161 Sussex Street has the potential to contain a range of archaeological deposits, dating from the prehistory of Australia to the early twentieth century, which may represent Darling Harbour's Aboriginal history and part of the early development of industry and urbanisation in Sydney.

In light of the fact that the archaeological assessment component of the HIS is considered to be inadequate and flawed, it is strongly recommended that a full assessment of Aboriginal and historic archaeological values should be prepared prior to this development application being determined.

6. Traffic Impact

In order to determine the impacts of the proposed development on the existing road network, GTA Consultants have undertaken an review of the traffic and parking implications of the proposed development, located at **Attachment 3**.

GTA considered the impact of the future traffic generation, parking demand and accessibility characteristics of the development on the site within the context of the existing surrounding road network and the site's operational capacity to accommodate the anticipated demand.

Following GTA's assessment, it is their opinion the Transport and Accessibility Impact Assessment Report is lacking in detail to adequately assess the traffic and transport implications of the proposed development. Key aspects of this include the porte cochere capacity and queuing, taxi zone capacity and overall operations, loading dock and bus/coach operations and future capacity and bicycle parking facilities.

GTA consultants undertook an initial SIDRA analysis which indicated the intersection of Sussex Street and King Street experienced significant delays with queuing for the northern approach. However, this analysis did not correspond to the Transport and Accessibility Impact Assessment Report prepared as part of the DA. It is recommended that an investigation be undertaken to clarify both the existing and future traffic conditions of the surrounding road network.

Conclusion & Recommendations

Our Client is not opposed to development of the site. However, the proposal in its current form is considered an overdevelopment of a site that, in keeping with the topography of the CBD skyline, should decrease in height and intensity as it nears Darling Harbour to the west.

Based on the review of the development application lodged over 161 Sussex Street, a number of issues and concerns have been identified that should be addressed in the proposal. These include:

- The building height is excessive and does not respect the CBD topography or the height generally of development on the western side of Sussex Street (with the exception of Darling Park).
- The proposed new tower is not separated from the tallest portion of the neighbouring Hotel to which it adjoins and consequently presents an unacceptable building mass and length to Sussex Street and Darling Harbour at high level.
- The adjacent planning controls should be considered in the assessment of the proposed development to ensure consistency with the existing and future built form of the surrounding land.
- The building is not setback from its Market Street boundary which adds to the overall length of the development and its excessive bulk.
- The tower will cast unreasonable shadows over Darling Harbour in the morning for the majority of the year.
- The proposed tower will significantly impact on the heritage significance of the Corn Exchange with respect to its wider visual setting and its prominence in established local views.
- Inadequate reporting was undertaken with respect to the Heritage Impact Statement. It is recommended a full assessment of Aboriginal and historic archaeological values be prepared so as not to overlook any potential archaeological deposits on site.
- Traffic analysis relating to the existing and future traffic conditions of the surrounding road network were understated in the Transport and Accessibility Impact Assessment Report. This should be investigated further.

The height of the proposed building should reflect the current height of existing buildings located on site. This will result in a bulk and scale consistent with the surrounding development, maintain the height plane of the skyline of the CBD and enable view sharing from the CBD to Darling Harbour.

We trust the above issues will be considered and addressed by the Department as part of their assessment of DA Ref **SSD-4972**. Our Client would be happy to provide comment on an amended design proposal for the site.

We trust this information is sufficient for your purposes, however should you require any further details or clarification, please do not hesitate to contact the writer by telephone.

Yours sincerely
RPS



KATE SHEEHAN
Planner

cc: Tom Skotadis, CBRE
Jason Maxwell, Charter Hall
Rob Dickson, Spectrum Partners

enc: Attachment 1 – Architectural Assessment of Building Impact, prepared by Crone Partners
Attachment 2 – Review of Heritage Impacts, prepared by RPS
Attachment 3 – Review of Traffic and Parking Implications, prepared by GTA

Attachment I

Architectural Assessment of Building Impact

Prepared by Crone Partners



ARCHITECTUREAL ASSESSMENT OF BUILDING IMPACT

PROPOSED 4 POINTS HOTEL
EXPANSION

161 SUSSEX STREET,
DARLING HARBOUR

25 . 10 . 2012

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communication /

Sydney - Crone Partners

Level 2, 364 Kent Street, Sydney, NSW 2000 Australia

T +61 2 8295 5300 **F** +61 2 8295 5301

Melbourne - Crone Partners

Level 9, 51 Queen Street, Melbourne VIC 3000 Australia

T +61 3 8621 8000 **F** +61 3 8621 8088

Newcastle - Crone Partners

PO Box 1785, Newcastle, NSW 2300 Australia

T +61 2 4926 3511 **F** +61 2 4926 3522

Brisbane - Crone Skou

7 Light Street, Fortitude Valley, QLD 4006 Australia

T +61 7 3216 0402 **F** +61 7 3216 0403

website www.cronepartners.com

Contact:

Bob Smale - Director

Level 2, 364 Kent Street, Sydney, NSW 2000 Australia

T +61 2 8295 5300 **F** +61 2 8295 5301

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ARCHITECTURAL ASSESSMENT OF BUILDING IMPACT

Proposed 4 Points Hotel Expansion
161 Sussex Street, Darling Harbour

cronepartners

Level 2, 364 Kent Street
Sydney NSW 2000
Telephone: 61 2 8295 5300
Facsimile: 61 2 8295 5301

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EXECUTIVE SUMMARY

The proposed Hotel and Commercial re-development of the 4 Points Hotel at 161 Sussex Street has been reviewed and assessed for its urban impact.

The assessment is based on the proponents submission material, widely accepted CBD planning controls and additional views which illustrate a broad range of negative impacts.

The proposed development has been shown to be excessive or has failed in the various key indicators identified. Notably;

- The building height is excessive and does not respect the CBD topography or the height generally of development on the western side of Sussex Street (with the exception of Darling Park).
- The proposed new tower is not separated from the tallest portion of the neighbouring Hotel to which it adjoins and consequently presents an unacceptable building mass and length to Sussex Street and Darling Harbour at high level.
- The building is not setback from its Market Street boundary which adds to the overall length of the development and its excessive bulk.

Together these attributes do not respect accepted planning controls nor “protect and enhance the amenity of residents, workers and visitors” (City of Sydney LEP 2005).

Additionally, and of particular concern is loss of quality and amenity of the public domain;

- The Market Street vista to Darling Harbour is substantially lost.
- Iconic views to the Australian Flag, the Maritime Museum and Centrepont Tower are lost.
- The new tower proposal is awkwardly appended to the existing Hotel and high quality urban design and relationships to neighbouring development are not achieved.
- Key vistas and views to and from Darling Harbour have not been protected and enhanced.

As a consequence of the above and the associated overdevelopment of the Site it is apparent that Design Excellence has not been achieved by this proposed development.

Major remodelling of the Hotel addition is required to reduce height, mass and bulk and to ensure achievement of acceptable and appropriate high quality Urban Design and preservation of the amenity of neighbours.

1.0 INTRODUCTION

This Report has been prepared at the request of CBRE on behalf of, Perpetual Trustees Consolidated Limited, the owners of 2 Market Street, Sydney.

The Report forms part of the submission by RPS in response to the Development Proposal by Cox Richardson for 161 Sussex Street as submitted to the Department of Planning and Infrastructure by JBA Planning in their Environmental Impact Statement (EIS) dated August 2012.

Specifically this Report examines the physical and visual impact of the proposed development on the Public Domain and immediate neighbours. Where appropriate the claims regarding visual impact of relevant contributors to the EIS are examined for their veracity.

The intent of this Report is to examine whether the proposed development represents an overdevelopment of the site and whether design excellence has been achieved.

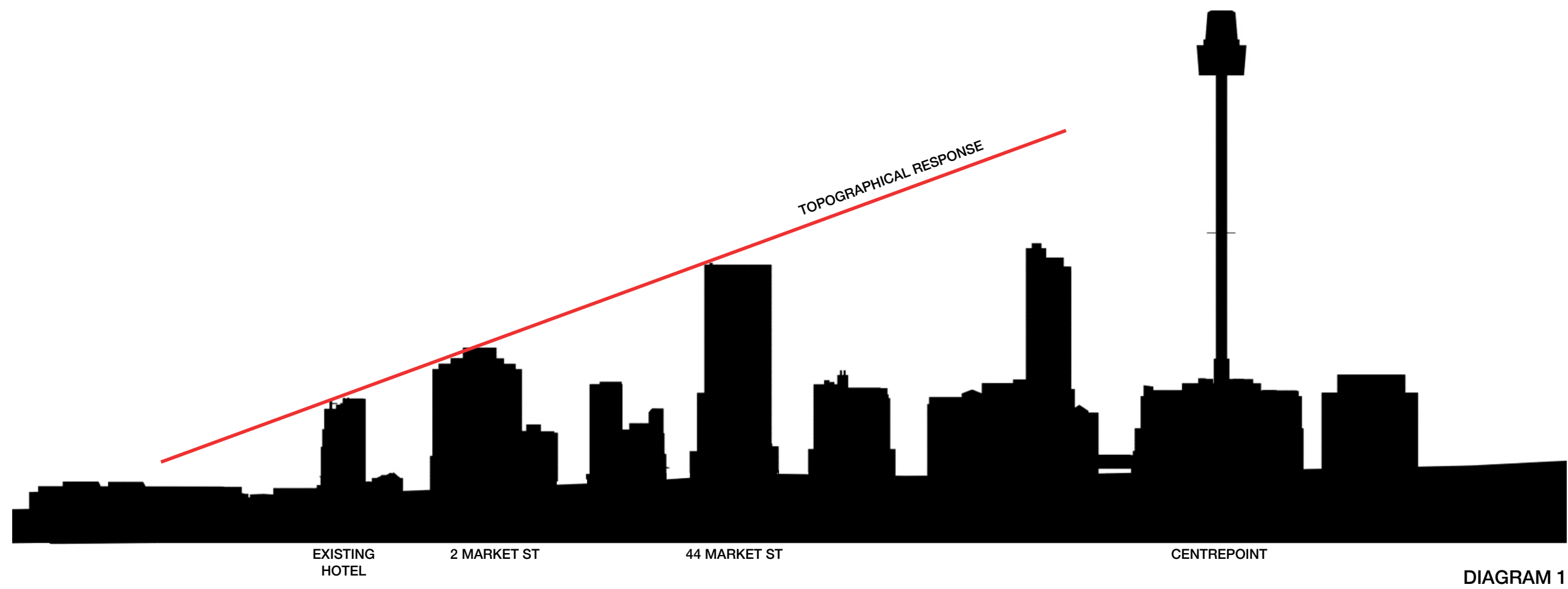
The Report does not attempt to assess the podium portion of the building. The GMU Visual Impact Assessment clearly indicates that the design in this area is not well resolved and requires review.

The authors of this Report strongly support that assessment.

2.0 METHODOLOGY

This Report has been developed on the basis of a visual assessment of the area, research of relevant planning principles and review of Development Proposal documents based on the following methodology'

- Research relevant planning principles considered relevant to the study.
- Review the various relevant Development Proposal documents including;
 - Cox Richardson Architectural Design Statement
 - Cox Richardson plans for redevelopment
 - GMU Visual Impact Assessment
 - JBA EIS
- Site visits of key viewpoints identified by the proponents.
- Identification of additional key viewpoints.
- Consideration of views from within 2 Market Street.
- Assembly of photomontages of the proposed development based on the key viewpoints.
- Consideration of the impact of the development from the assembled information and comparison with the results proffered by the development's proponents.
- Prepare Report.



3.0 URBAN DESIGN PRINCIPLES

While the development is not within the City of Sydney's jurisdiction its location on the Sussex Street boundary edge of Central Sydney and the need for continuity of controls across the edges of jurisdictions is significant. Additionally the basic principles of the City's planning controls are applicable to CBD urban development generally.

3.1.1 Strategies for Achieving High Quality Urban Development

Within Part 2 of the City's LEP are the following strategies;

- (f) protection and enhancement of the amenity of residents, workers and visitors
- (g) protection and enhancement of the quality and amenity of the public domain – the parks, places, streets and lanes
- (j) conservation of heritage items and areas
- (k) achievement of a high quality of urban form and design and in the relationship of buildings to neighbouring development
- (q) protection and enhancement of views and vistas to the harbour parkland and buildings and places of historic and aesthetic significance.

3.1.2 Design Excellence

The site is within the Darling Harbour precinct which is identified as a State Significant Site and the value of the development determines that it be declared a State Significant Development.

Similarly the City of Sydney would require a Development Plan for the Site and for it to meet the City's Design Excellence provisions including a Design Competition.

3.1.3 Building Height

Building height controls across the City, Darling Harbour, King Street Wharf and the like are based on widely accepted principles of following the topography. Particularly in Sydney's case, where the central spine of the City is located on a ridge flanked generally by parkland or water on both sides, this principle is well founded. Locating the tallest buildings along the spine and the lowest buildings at the fringes has many benefits including;

- maintaining topographical form
- reducing overshadowing to public areas and the fringes
- maintaining light and outlook
- sharing of amenity including views
- maximising visual connection to the Public Domain
- maintaining the quality of space to the major public areas at the City's edge.

Refer Diagram 1

The application of graded height controls has been long demonstrated in developments throughout Darling Harbour, King Street Wharf and the City. Significant recent examples can be seen at Darling Walk, Darling Harbour, 1 Shelley Street King Street Wharf, The Bond Hickson Road and SkyVue on George Street.

Draft Sydney Development Control Plan 2010
Section 4 – Specific Areas

4.1.2.4 Separation of buildings on the same site

(1) For buildings on the same site, minimum separation distances are to be as shown on Figure 4.11.

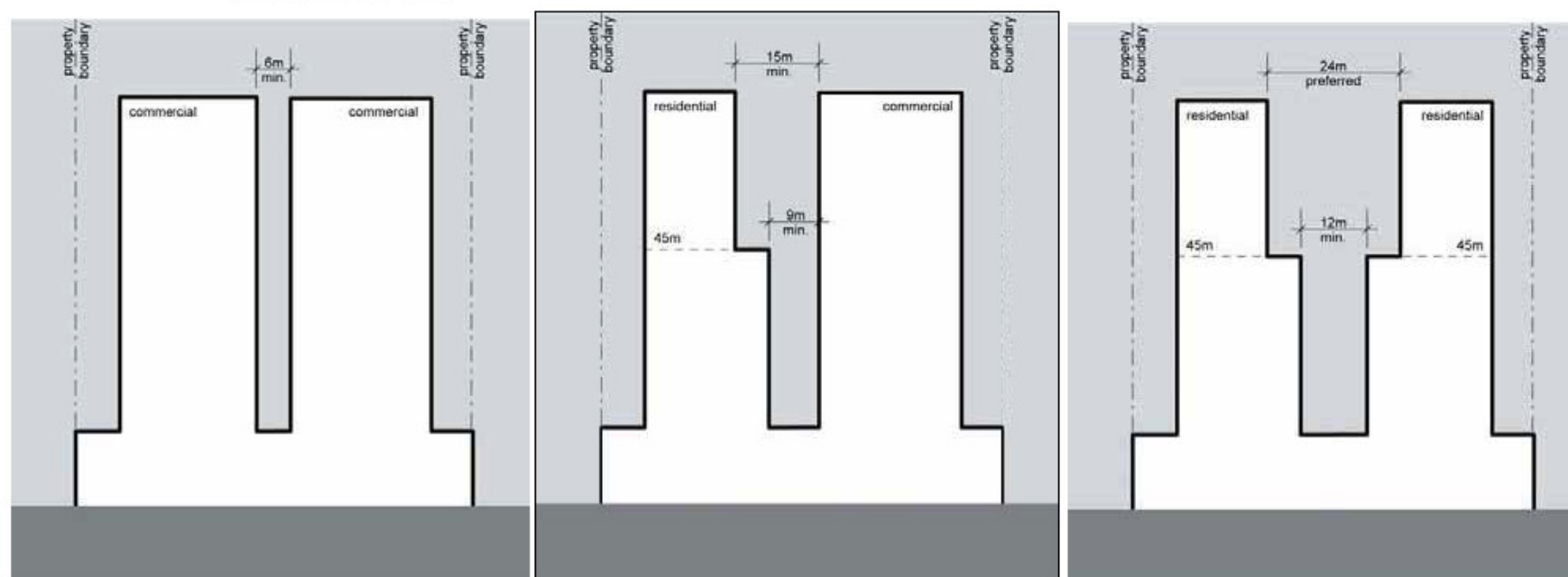


DIAGRAM 2

3.1.4 Building Separation

An accepted principle of good Urban Design is separation of buildings either across sites or within large sites. The towers at 2 Market Street and 383 Kent Street adjacent to the subject site clearly demonstrate this principle. Both buildings present a continuous street wall at footpath level but above nominal podium heights of 25 to 30 metres respectively, the tower buildings are significantly set back from their boundaries, each other and neighbouring buildings.

This has the effect of avoiding the mass of continuous high level building form which might otherwise occur and allows improved amenity related to outlook, overshadowing, natural light and private view sharing.

Refer Diagram 2.

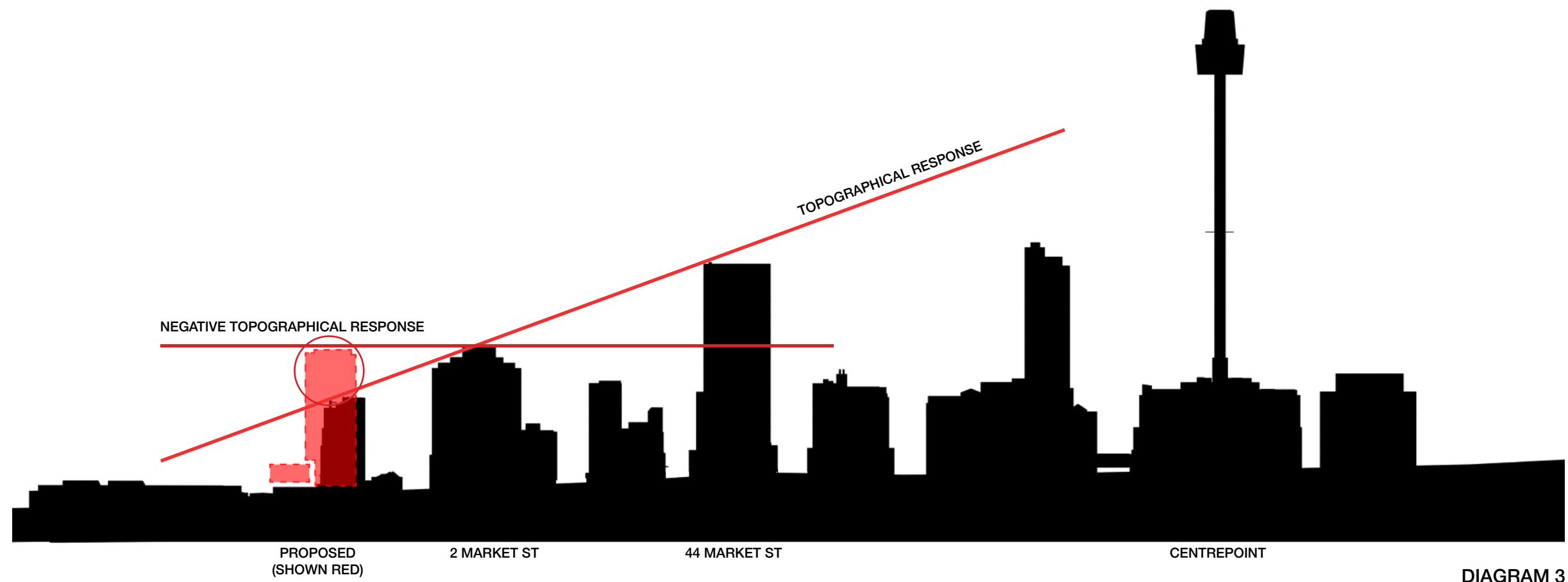
3.1.5 Building Bulk

Related to the need for building separation is control of bulk again to avoid large bulky buildings being developed to an excessive height. City of Sydney for instance limits horizontal dimensions of buildings in excess of 45 metres high to 65 metres.

There are good examples of commercial buildings in Darling Harbour and King Street Wharf with lengths of approximately 100 metres but in both cases (Darling Walk and 1 Shelley Street) the heights of both buildings is less than 40 metres.

3.1.6 Boundary Setbacks

Boundary setbacks for tall buildings are important for a range of reasons. Importantly they help to avoid the canyon like effect created when tall buildings are built to the boundary. The setbacks also contribute to improved shared amenity, outlook and views, tower separation and building bulk.



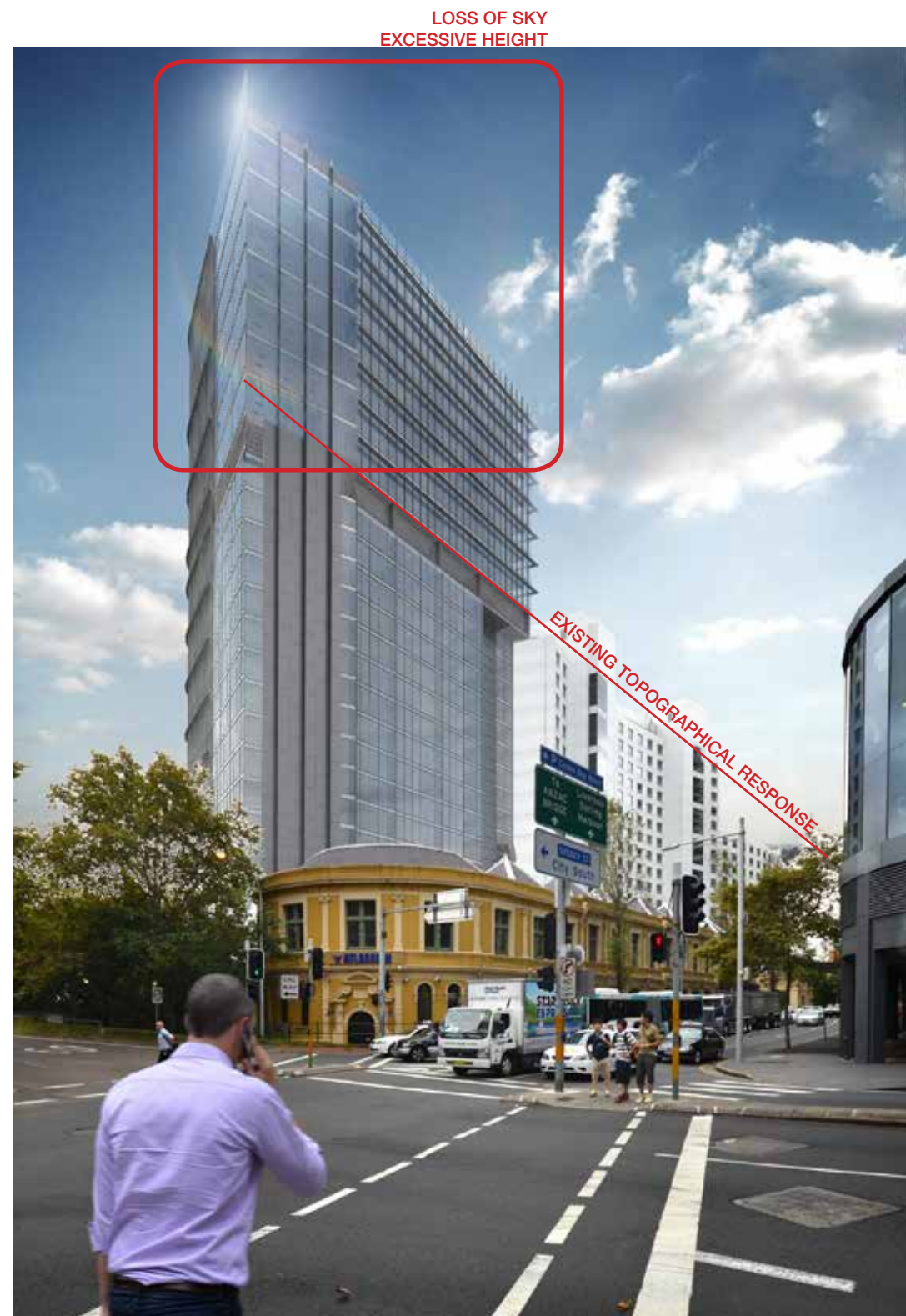
4.0 REVIEW OF KEY SUBMISSION DOCUMENTS

The Section examines the key submission documents prepared by Cox Richardson, GMU and JBA to identify areas which are contentious and to highlight concerns and issues which have apparently been overlooked. This is presented in table format of items, illustrations and comment for easier understanding.

The first column provides quotes or summaries of key statements from the various submissions justifying the proposed design. The second column provides commentary on these items demonstrating that the justifications can be readily questioned and challenged.

4.1 Architectural Documents and Design Statement

SUBMISSION ITEM	COMMENT
COX RICHARDSON DESIGN STATEMENT	
3.1 Scale and Massing (i) "In an east west orientation, the tower scale reinforces both the topography and built form of the CBD. It acknowledges and reinforces the stepping-down and reduction of scale from the ridge line of George Street to the lower scale of Sussex Street. As viewed from the public domain of western Darling Harbour, a layering of built-form is evident beyond the proposed tower as the CBD scale increases to the east, rising to the George Street ridgeline". (ii) "Limiting the height of the proposed tower to the height of the existing hotel building was considered and rejected. It was considered that this approach would result in an extended, monotonous and undifferentiated street wall to Sussex Street".	<p>This is not the case. The tower proposal does not acknowledge and reinforce the reduction in scale from the ridge. The existing Hotel does, however, the new building runs counter to it. Refer Diagram 3.</p> <p>There is, indeed, a layering of built form evident in the existing view from the west beyond the existing tower. Unfortunately the new proposal does not contribute in any way to this principle.</p> <p>There are many examples of additions to predominantly horizontal buildings demonstrating that this can be achieved in exciting and interesting ways. There is no reason why it should be monotonous or uninteresting. This is the architectural challenge. The Museum of Contemporary Art at Circular Quay is a prime example.</p>
3.2 Address Corner Condition (i) "The orientation of the tower maximises hotel rooms with vistas over Darling Harbour and as a corollary to this, minimises rooms with vistas over Sussex Street".	<p>There is nothing unusual about the tower orientation. The plans actually results in only 7 of 18 rooms directly facing Darling Harbour with the remainder facing either south to Darling Park or east to Sussex Street.</p>



VIEW A (COX)
Poor Corner Resolution. Heritage Assessment Favours A Curve.



VIEW B (COX)
Distorted And Thus Misleading Viewpoint

SUBMISSION ITEM	COMMENT
(ii) The Cox Design Statement includes various discussions justifying the orientation of each façade and relationships to Pymont Bridge, Market Street and Sussex Street.	<p>The outcome however is an oversized bulky floorplate, pushed to the boundary with disparate façade treatments, providing no genuine relationship to the existing building and by doing so, not attempting to acknowledge the amenity of the buildings immediately behind.</p> <p>The corner condition is not fully resolved with the SE (Market/Sussex) corner being especially uncomfortable. Refer View A.</p>
<p>3.3 Frame Market Street Vista</p> <p>(i) “The built form of the proposed tower references the triangular plan form of the adjacent Darling Park towers”.</p> <p>(ii) “The proposed tower together with the northern Darling Park tower, frame and reveal vistas west towards Darling Harbour along the Pymont Bridge and Market Street alignments”.</p> <p>(iii) “Similarly the towers also frame and demarcate the approach to the CBD from the public domain of Pymont Bridge”.</p>	<p>Again this is not the case. The proposed building is essentially rectilinear. The corner photomontages submitted are highly distorted and do not represent the fact that these corners are 90 degrees. Refer View B.</p> <p>Unfortunately, rather than framing the vista (which is already framed by the existing Hotel) the very significant public vista is dramatically reduced by about 31% or nearly a third. Refer Diagram 4.</p> <p>The towers don’t frame and demarcate the CBD approach from Pymont Bridge. The proposed tower is significantly forward of Darling Park Tower 1 and of significantly different scale so the framing is questionable. Refer View C.</p> <p>The existing demarcation by the bridge and freeway is far more significant than anything that might be contributed by the proposed building.</p>
<p>3.4 CBD Gateway</p> <p>“The proposed tower has a significant urban design role to play within the context of Darling Harbour and the Pymont Bridge in enunciating the connection with the entry to the CBD street grid”.</p> <p>“Together with the northern Darling Park Tower the proposed tower frames and identifies Market Street on approach from the west via the Pymont Bridge”.</p>	<p>It is unlikely that the tower will contribute to a Gateway perception. The location of the proposed tower, remote from the true commencement of Market Street, off grid and out of alignment, will more likely be a distraction especially when approaching by car.</p> <p>The Gateway concept, attempting to be achieved by 2 buildings of vastly different scale, spread well apart and not appropriately aligned in relation to the Pymont Bridge axis is spurious.</p> <p>A much stronger argument for the Market Street City gateway can be mounted for the existing 2 Market and 1 Market Street buildings.</p>

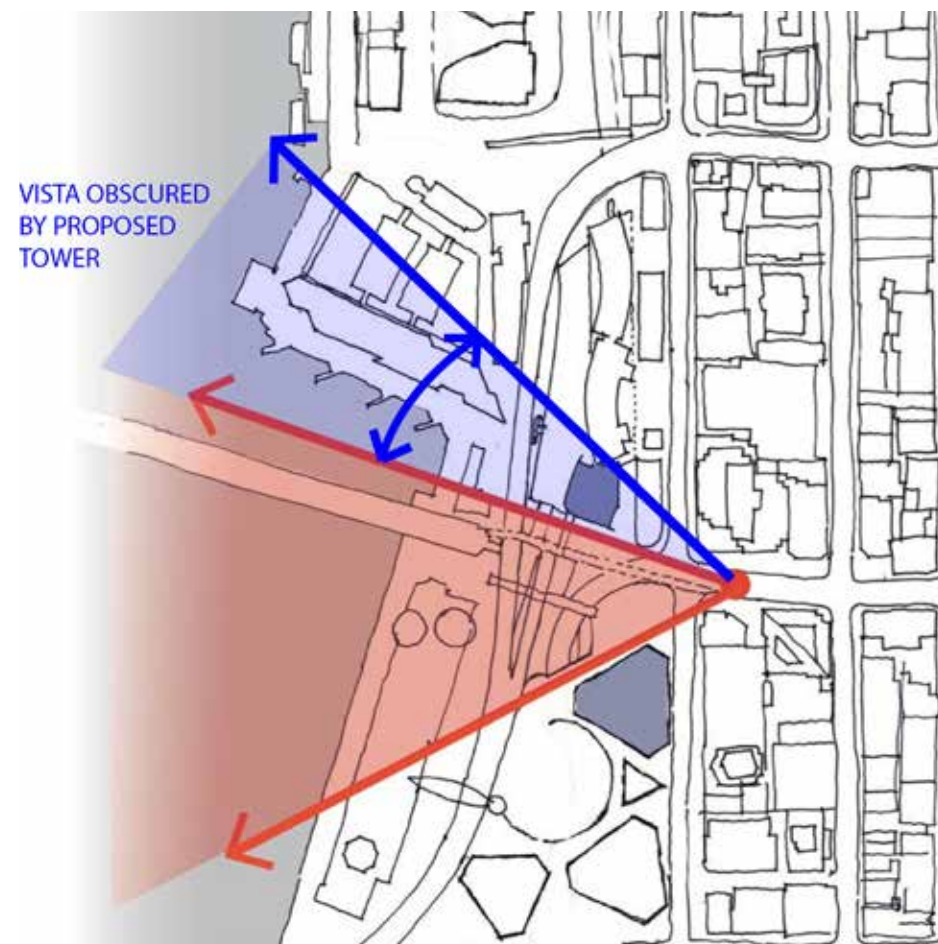
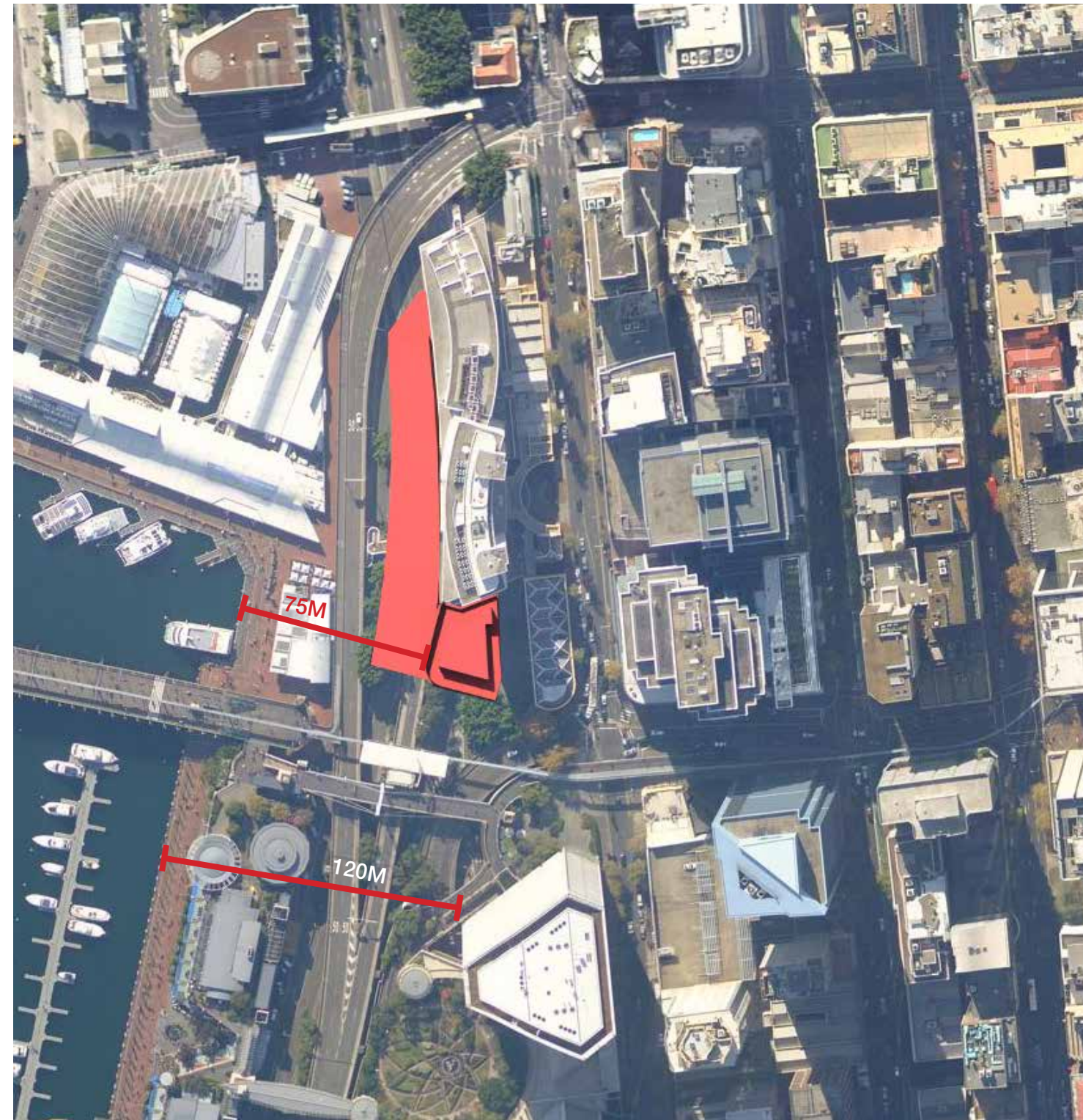
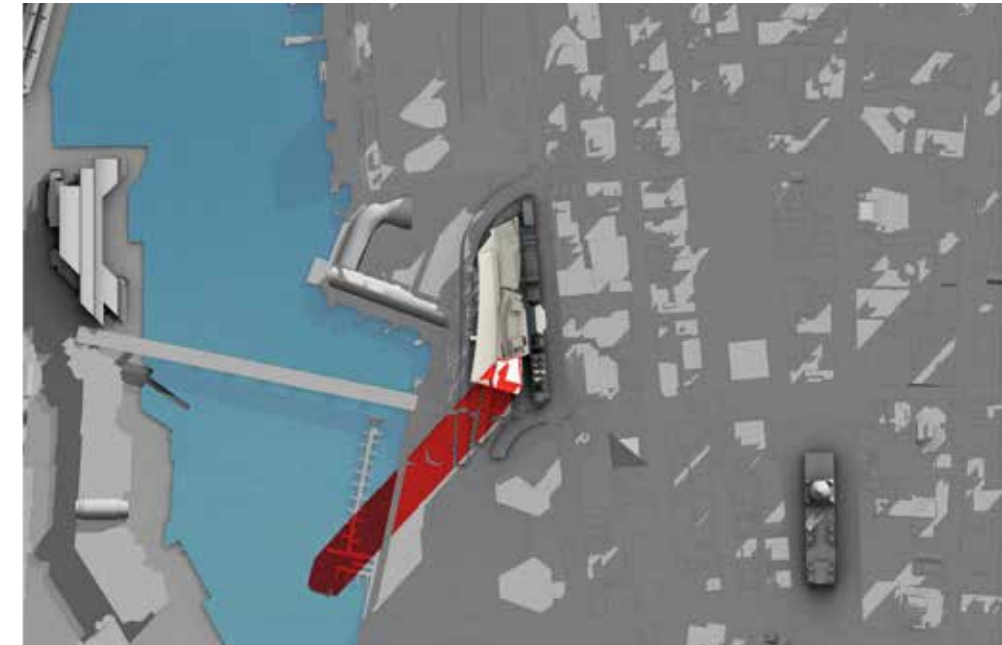


DIAGRAM 4
Vista Obstruction



VIEW C
Tower Setbacks

SUBMISSION ITEM	COMMENT
	These 2 buildings are of similar scale, are more closely aligned, are closer together and are square to the grid.
3.7 Separate Identity to 4 Points Hotel "Extending the character and fenestration of the existing hotel building to the new tower would reinforce the very significant scale and singular presence of the existing development. This was considered detrimental in urban design terms. By contrast a separate identify which reduces the perceived scale of the development to a grain similar to that east of Sussex Street is considered positive".	Most will agree that a separate identity will be an improvement on any other approach to break down scale and monolithic presence. The suggestion, however, that the tower form proposed as opposed to something of lesser height will somehow reduce perceived scale is illogical.
COX RICHARDSON DRAWING SUBMISSION	
1. Shadow Studies	The shadow studies clearly demonstrate that the tower form introduces significant overshadowing to the Darling Harbour waterfront pedestrian area during the morning throughout the year. Refer Diagram 5.
2. L16-L22 Typical Commercial Level DWG 0209	Demonstrates how minor changes to inefficient areas of the floorplate can have significant view sharing outcomes. The required reduction in height and building separation will improve this further. Refer Diagram 7.
3. East Elevation DWG 0302	Illustrates the considerable uninterrupted length of the building resulting excessive bulk and inadequate tower separation. A portion of the building has a horizontal dimension of 105 metres with a building height of 56 metres or more. Building separation is essential to break this down. Refer Diagram 6.
4. External Perspective – SW View DWG 0320	The view is an unrealistic representation attempting to make the building appear more slender than it really is. The corner building appears triangular when in fact it is largely rectilinear.



Jun 21 9AM



Dec 21 9AM

DIAGRAM 5 (COX)
Shadow Diagrams

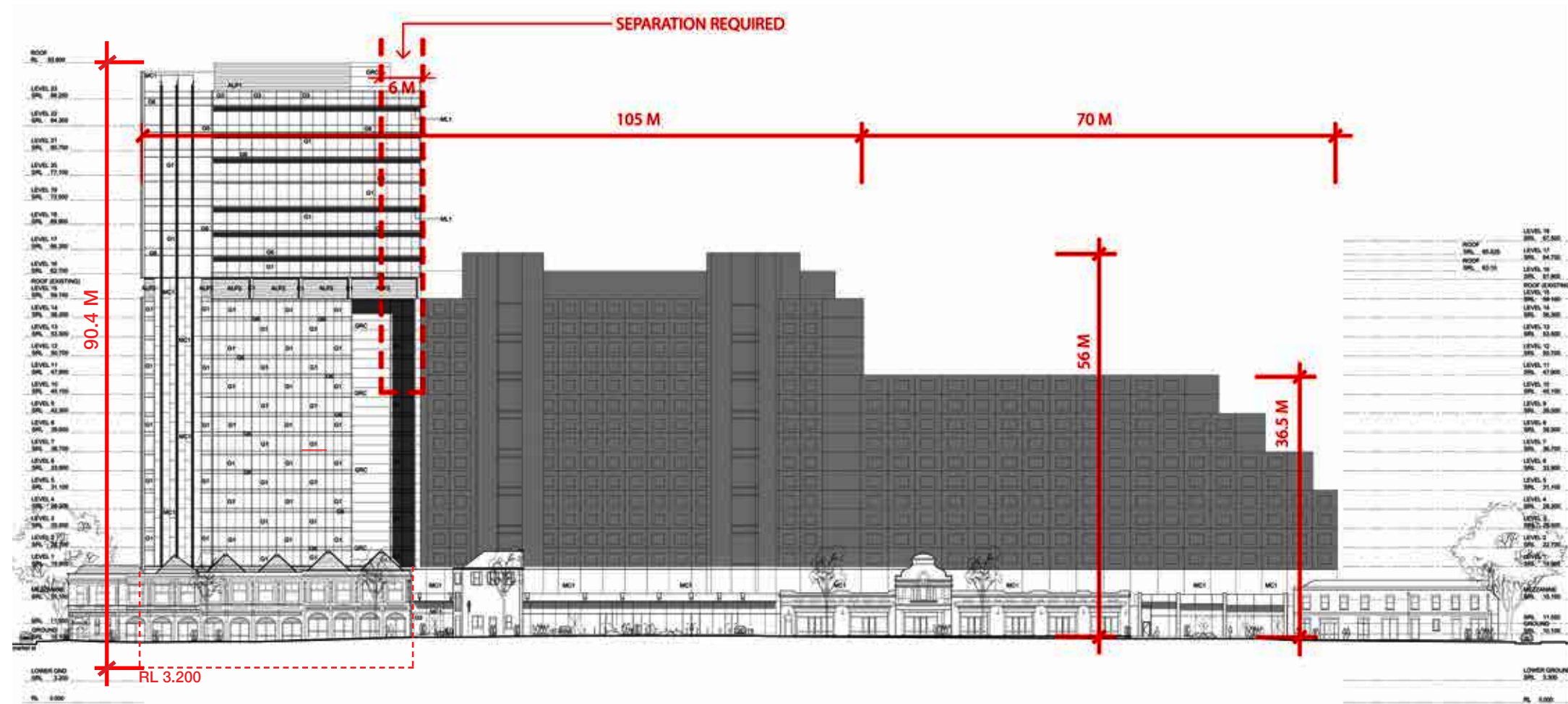


DIAGRAM 6 (COX)
East Elevation

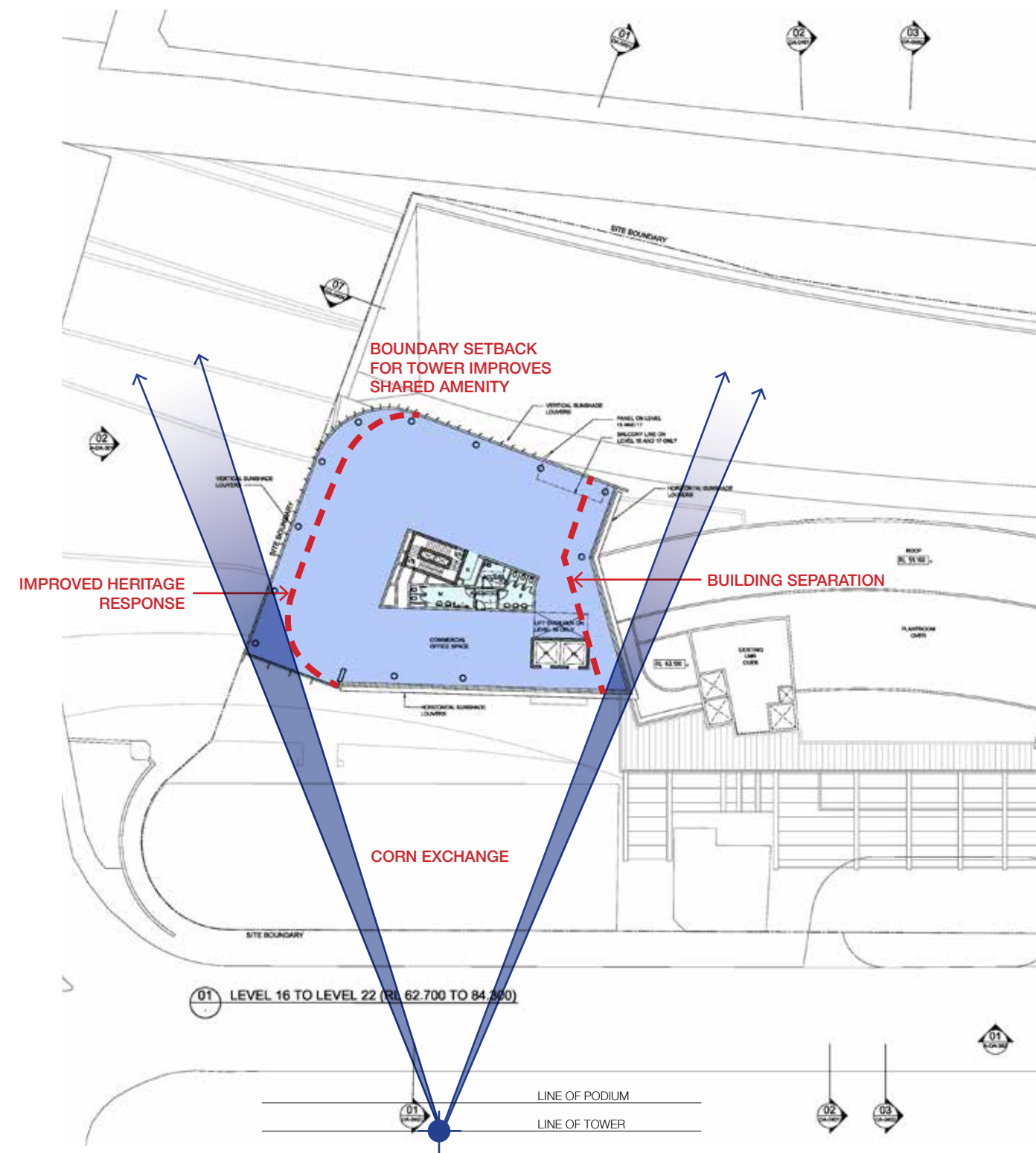
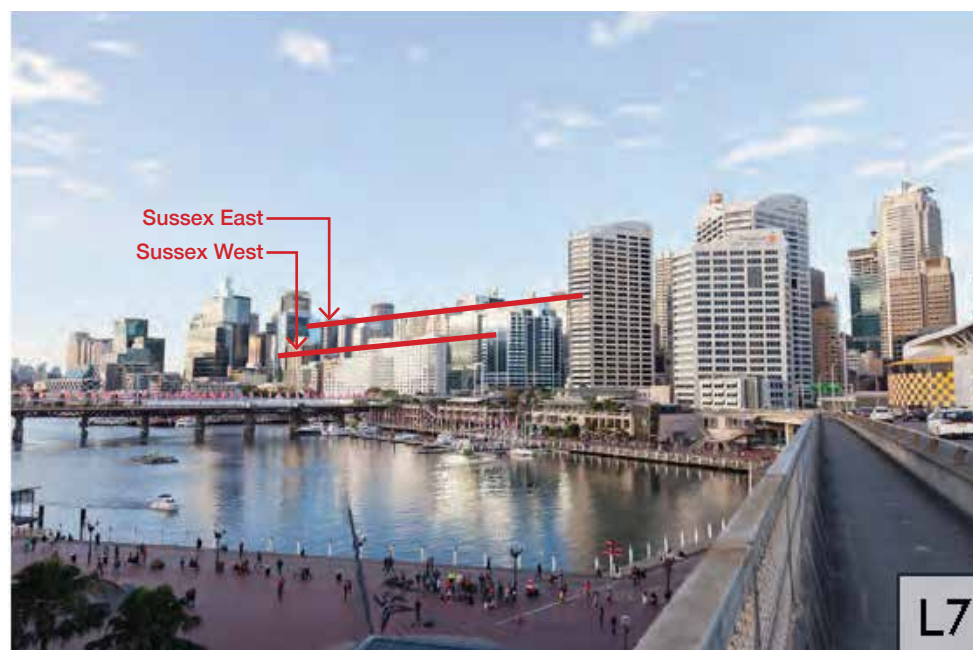


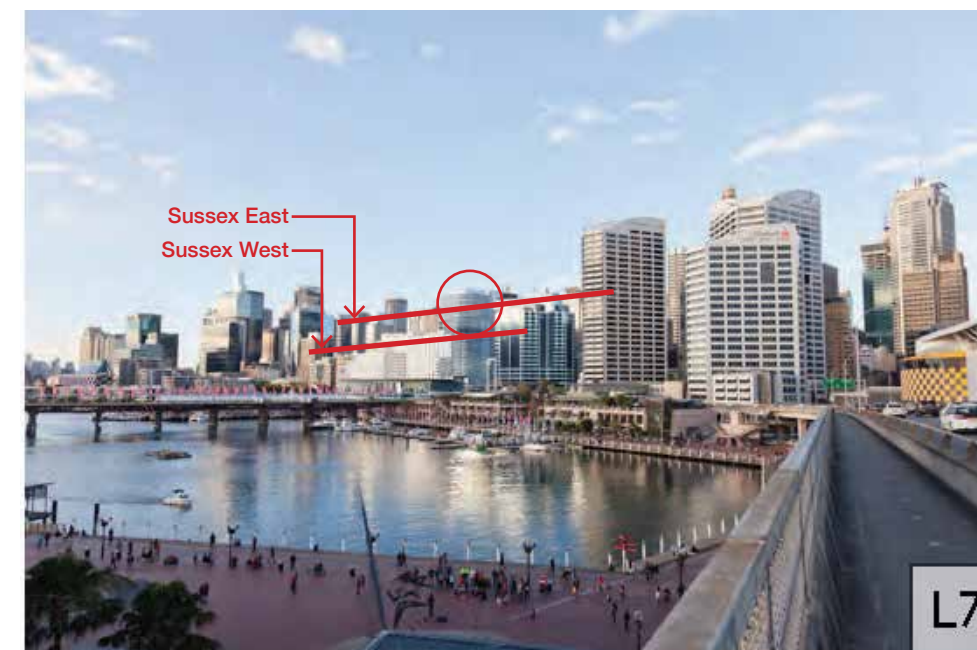
DIAGRAM 7
Floorplate Modifications For Improved Urban Design And Shared Amenity

4.2 GMU Visual Impact Assessment

ITEM	COMMENT
<p>p.11 Private Views</p> <p>The Assessment acknowledges private views are important and have been included as directed by the DGRs.</p>	<p>Only private residential views are considered. There is no attempt to consider the impact on views of city workers. In particular 2 Market Street, located directly behind the proposed tower is overlooked.</p> <p>Interestingly, given the amount of daylight hours spent at the workplace and the density of occupation, many more workers than residents will be impacted due to loss of view and amenity generally.</p>
<p>p.14 Key Visual Objectives</p> <p>The Assessment acknowledges that the Harbour REP requires consideration of issues including “maintenance of views” to ensure better and consistent development.</p> <p>Harbour REP Clause 26(a); “development should maintain, protect and enhance views (including night views) to and from Sydney Harbour.</p>	<p>As indicated above the Assessment does not adequately consider this issue in an area where the Proposal performs poorly.</p> <p>There is serious loss of amenity to 2 Market Street and little attempt to follow basic design principles that would result not only in greater shared amenity but an improved urban design outcome.</p>
<p>p.15 Conclusion</p> <p>GMU reference Sydney LEP 1996 and extrapolate that buildings on the West side of Sussex Street should be subject to the same 80 metre height control as exists on the East.</p>	<p>GMU offer no support for the presumption that the allowable height on the East side of Sussex Street should be transferred to the West.</p> <p>In fact, all available evidence suggests that this should not be the case.</p> <p>The topographical response indicates that the height should be reduced on the west of Sussex Street. Changes in Height Controls are best made along street alignments rather than mid-block so that inequities on immediately adjacent sites are minimised. City of Sydney height controls generally reflect this.</p> <p>Given that the land to the west of Sussex Street is the last significant remaining block prior to encountering the low rise development at the edge of Darling Harbour it should be expected that this land will have a reduced height allowance in order to affect a more reasonable transition between the 80 metre control on the east side of Sussex Street and the Harbour. This</p>



VIEW D (GMU)
Freeway - Existing View



VIEW E (GMU)
Freeway - Proposed View



VIEW F (GMU)
Darling Harbour - Existing View



VIEW G (GMU)
Darling Harbour - Proposed View

ITEM	COMMENT
	<p>type of planning principle can be readily observed in the now complete King Street Wharf.</p> <p>In addition the height of the existing hotel itself sets a strong precedent for any new development being restricted to a maximum of 55 metres.</p>
RESPONSE TO VIEW ASSESSMENTS	
View L7 – Western Distributor Travelling East	
<p>GMU maintain that the development will be seen as part of the existing wall of development along the edge of the City.</p> <p>Assessed: No Impact</p>	<p>This is not the case. The existing wall of development in this general location is along the eastern side of Sussex Street. The proposed tower which is acknowledged as being taller than 2 Market Street behind it clearly disassociates itself from the development behind it creating a morphography that is contrary to the topography. A building of reduced height would not have these adverse characteristics. Refer Views D and E.</p> <p>The view shows a street wall with very distinct separation in layering between the east side of Sussex Street (up to 80m high) and the west side of Sussex Street (up to 56m high). The proposed new tower does not maintain this street wall composition. The proponents seek to compare the tower to Darling Harbour Tower 1 however the latter is set 45 metres further back from the Harbour edge.</p> <p>Assessment: Medium Impact Mitigation measure: Reduce height</p>
View M1 – Darling Harbour, Harbourside	
<p>GMU claim a minor impact due to loss of a small area of sky.</p> <p>Assessed: No Impact</p>	<p>Like L7 above, due to its height, the proposed tower clearly breaks the skyline and similarly shows the contrary topographical response. Refer View F.</p> <p>Similarly the layering of City edge is compromised.</p> <p>Assessment: Medium Impact Mitigation measure: Reduce height</p>



VIEW H1 (GMU)
Pyrmont Bridge - Proposed View 44 Market St Obscured



VIEW H2
Existing Alternate Pyrmont Bridge View

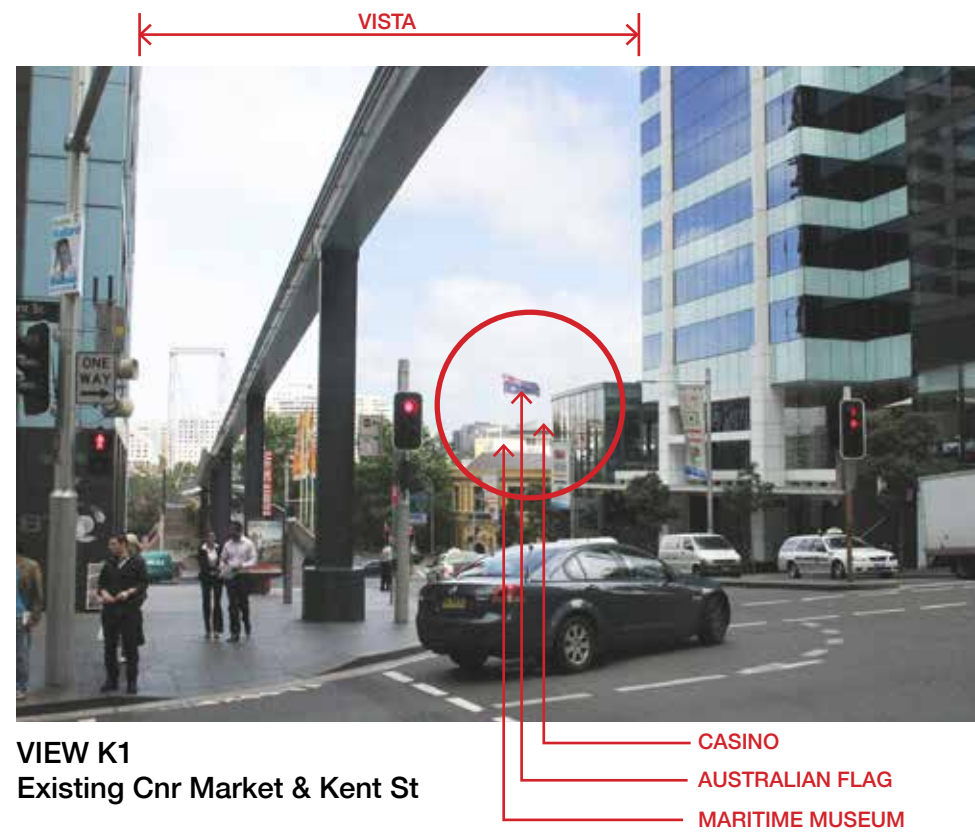


VIEW H3
Proposed Alternate Pyrmont Bridge View
Major loss of sky and iconic view of Centrepont Tower

ITEM	COMMENT
View M2 – Darling Harbour, Harbourside	
<p>GMU claim minor impact through minimal loss of sky.</p> <p>Assessed: No Impact</p>	<p>In this case the proposal substantially breaks the skyline to the extent that, even from this distance, the building silhouette exceeds the height of 44 Market Street back on the York Street ridge line. The building also sets itself apart from and dominates the buildings on the East side of Sussex Street. Refer View G.</p> <p>Assessment: Medium Impact Mitigation measure: Reduce height</p>
	<p>Significantly this image clearly illustrates;</p> <ul style="list-style-type: none"> (i) The Darling Park development is a unique precinct, when considered in relationship to its distance from the water's edge and height of buildings behind, and should not be considered a precedent for building height elsewhere. (ii) The differing heights, form, appearance and separation between the proposal and Darling Park 1 illustrate their ineffectiveness as Gateway buildings to Market Street. Nos. 1 and 2 Market Street are clearly the Market Street Gateway buildings. (iii) The contribution of Darling Park to the City's amenity with its beautiful, protected public garden, service retail, food court and public lounge may have been the justification for what otherwise is seen as an overdevelopment of the site. Also, significantly the Darling Park Tower 1 setback from the Harbour is considerably greater than the setback of the proposed tower.
View M5 – Pyrmont Bridge	
<p>GMU claim the proposal blends with the City skyline. Breaking the skyline is acknowledged as is minor impact on Centrepoin.</p> <p>Assessment: Low Impact Mitigation Measures: Nil to tower</p>	<p>This clearly demonstrates the negative topographic response of the proposed tower. Even from this distance away, the proposed tower, a building on the lowest part of the landform, breaks the skyline and largely obscures 44 Market Street, a taller office tower located at the top of Market Street on the ridge. Refer View H1.</p> <p>Additionally the proposed tower, by directly abutting the highest part of the Hotel, produces a continuous building form (105m) of excessive length and height. The location of the Pyrmont Bridge views in the GMU assessment has been carefully selected to avoid illustrating the impact on iconic Centre Point vistas. Views H2 & H3, taken a little further along the Bridge than H1</p>



VIEW J (GMU)
Sussex Street
 Poor viewpoint selection



VIEW K1
 Existing Cnr Market & Kent St

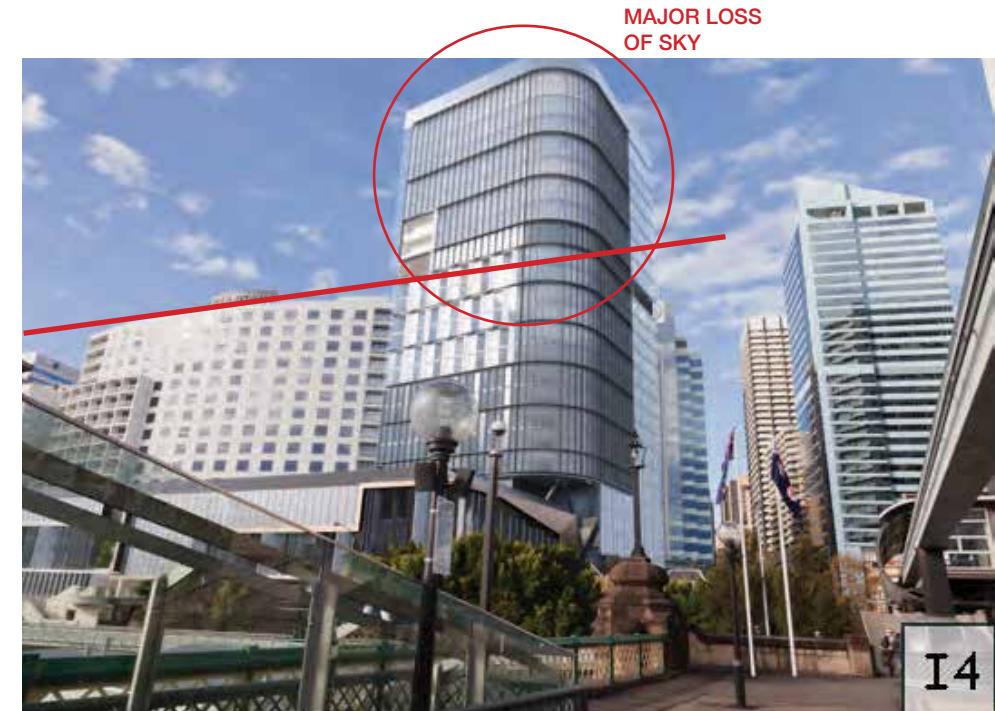


VIEW K2
 Proposed Cnr Market & Kent St

ITEM	COMMENT
	<p>shows the way that the proposed tower, with its excessive height will dominate the city edge, eliminate a significant iconic view to Centre Point and create an unacceptable wall of building where it abuts the hotel.</p> <p>Assessment: High Impact Mitigation measure: Reduce building height. Introduce building separation.</p>
View I2 – Market Street	
<p>GMU claims that although narrowing the view corridor the tower only reduces extent of sky and that no iconic elements are obscured.</p>	<p>This view point is of great concern. The view point has been deliberately removed from the corner with Kent Street to minimise the apparent impact of the proposed building. Refer View J.</p> <p>The significant view point is at the intersection on the SE corner. Refer View K1 & K2. Here the view really opens up with distant views even to the Casino. Notably, it is quite likely that traffic lights will break a pedestrian's journey providing the opportunity to take in the expansive vista. It is the first time that the imminent entry into Darling Harbour fully reveals itself.</p> <p>Like I2 below however this View has been carefully selected to attempt to minimise view impacts. View H1 from an alternate viewpoint on Pymont Bridge illustrates major concerns with the tower design as follows;</p> <ul style="list-style-type: none"> • The loss of the iconic view to Centrepont Tower. • The disregard for established massing heights on the east and west sides of Sussex Street, particular the lower height to the west. • The excessive tower height and loss of sky; and • The need for separation in the building forms. <p>Most significantly there is the first dramatic view of one of Darling Harbour's most unique and iconic features, the huge Australian Flag waving proudly well above the skyline and the Maritime Museum beyond.</p> <p>The proposed tower, without any setback to its southern boundary obscures all these features and this vital first connection is lost.</p> <p>Assessment: High Impact Mitigation Measures: Set back building from southern boundary</p>



VIEW L (GMU)
Existing Pyrmont Bridge View



VIEW M (GMU)
Proposed Pyrmont Bridge View



VIEW N (GMU)
Proposed Sydney Aquarium View
Poor viewpoint selection.



VIEW O1
Existing Sydney Aquarium View 2
View terminated by 1 Market St and row of trees.



VIEW O2
Proposed Sydney Aquarium View 2
New tower is overbearing and podium dominates the view. Extreme loss of sky.

ITEM	COMMENT
View I4 – Pyrmont Bridge	
<p>GMU claim the dramatic breaking of the skyline is justified on the basis of dramatic view termination, gateway and poor visual quality of 2 Market Street.</p> <p>Assessment: High but acceptable No Mitigation Measures required</p>	<p>The major breaking of the skyline serves best to illustrate how out of scale the development is with its neighbours.</p> <p>The 'before' photo clearly demonstrates the value of the existing 1 and 2 Market Streets as the significant gateway buildings into Market Street and Darling Harbour. Refer View L. There is no balance to the proposed new tower as a gateway as it is too isolated. Refer View M.</p> <p>2 Market Street (Allianz) is a highly sought after address providing A Grade office accommodation of superior quality and amenity. Its large floor plates will always make it a better choice for larger organisations than the proposed new building.</p> <p>It would be a travesty if an individual subjective assessment of its appearance could be used as a justification for depriving it and its occupants of their rightful access to amenity and further, as a justification for overdevelopment in order to obscure it.</p> <p>Assessment: High Impact Mitigation Measures: Reduce building height. Introduce building separation.</p>
View I5 – Sydney Aquarium	
<p>GMU claim the tower is balanced by Darling Park tower 1, that the new tower terminates the vista and acknowledges loss of sky.</p> <p>Assessment Impact: Medium but acceptable for the Tower Mitigation Measures: Nil</p>	<p>Unfortunately, like I2 a viewpoint has been chosen that doesn't reflect the true impact. Refer View N.</p> <p>A viewpoint closer to the tower is more critical. Refer View S1 & S2. They demonstrate that the excessive height of the tower results in it dominating the precinct in a way not even the Darling Park towers do due to the proposed tower being considerably closer to the water's edge.</p> <p>The closer viewpoint also results in excessive loss of sky. As for termination of the vista, the proposal actually cuts the vista in half and blocks it with this oversized tower awkwardly grafted on to the end of the Hotel.</p> <p>The existing open and more expansive vista, terminated by the freestanding and more distant 1 Market Street is preferable.</p>

TOWER SEPARATION



VIEW P1 - 2 Market St & 383 Kent (on Sussex St)



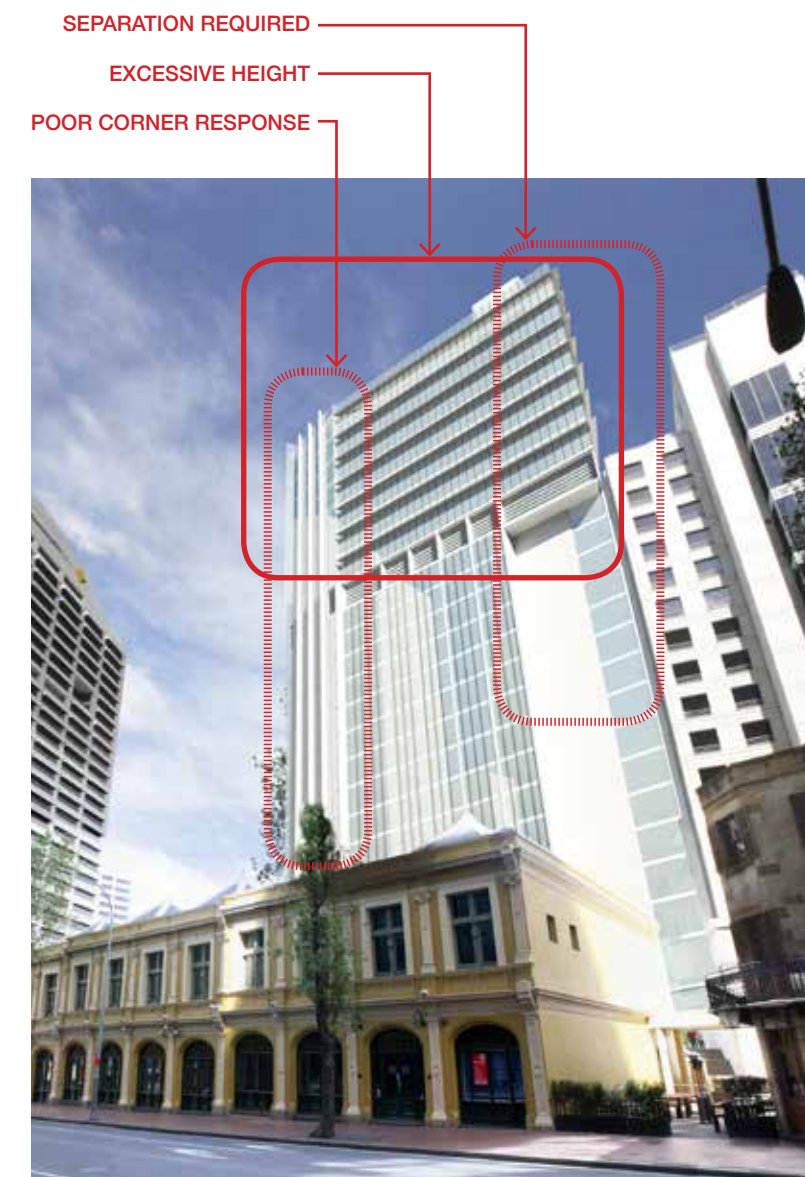
VIEW P2 - 383 Kent St & 160 Sussex St



VIEW P3 - 154 Sussex St



VIEW P4
Existing View From Sussex Street



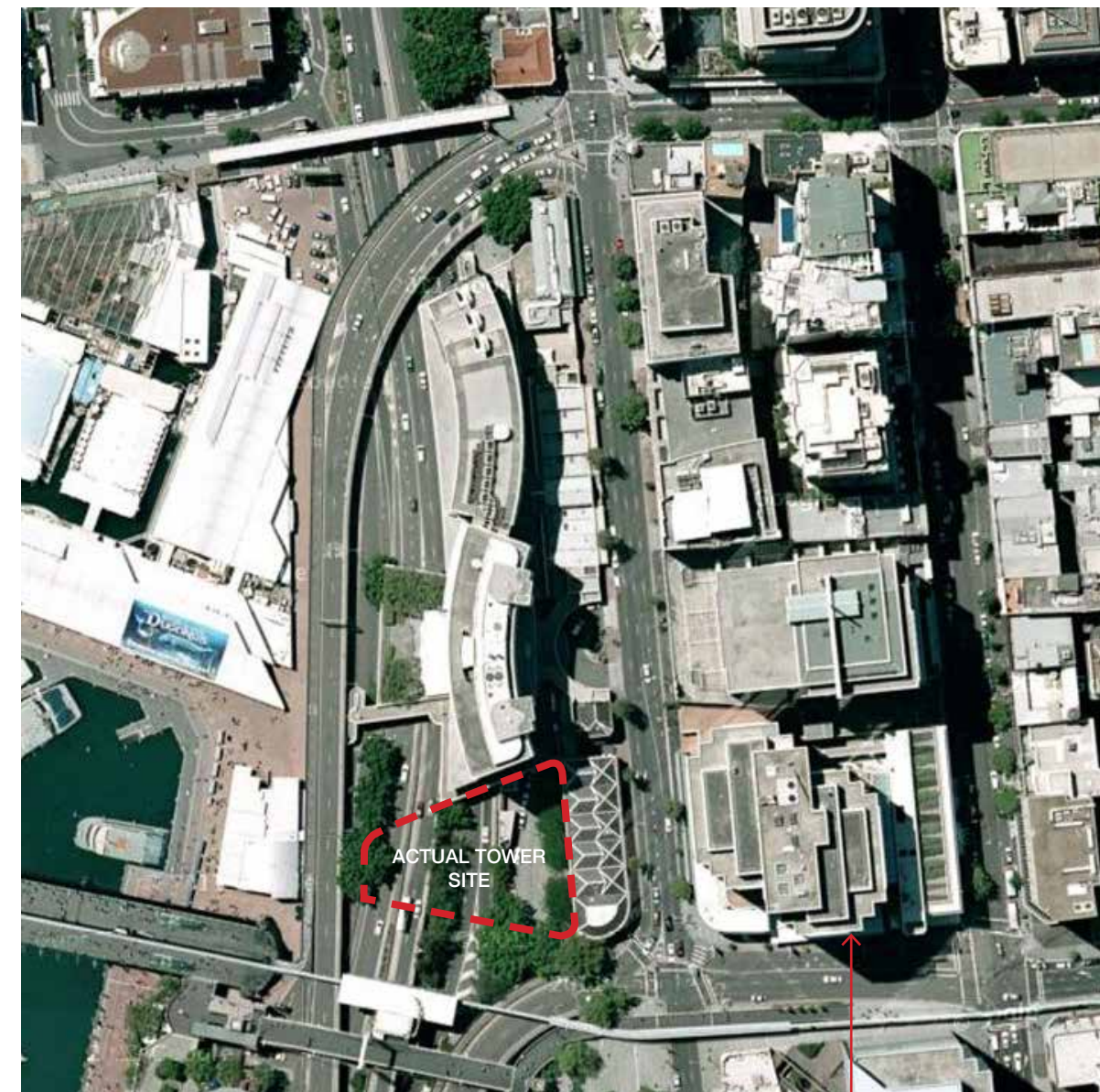
VIEW P5
Proposed View From Sussex Street

ITEM	COMMENT
	Assessment Impact: High Mitigation Measures: Reduce building height. Introduce building separation.
Building Separation	
GMU do not consider views highlighting building separation.	Views P1, P2 and P3 indicate the separation between towers opposite the site in Sussex Street (2 Market Street and 2 Kent Street). Views P4 & P5, of the proposed tower and the existing Hotel shows the awkward junction between the two buildings and illustrates the need for tower separation to relief the massive building form developing.
Conclusion and Recommendations	
On the basis of its viewpoint assessment GMU claim that; <ul style="list-style-type: none"> • There are no significant public domain view impacts. • Some adverse impacts to private residential views justified on the basis of benefits to the City of the expanded Hotel. • The building can be justified because it screens 2 Market Street which is less appealing visually. • It does not impact on iconic views to Centrepont. 	This report has found serious disagreement with key aspects of the GMU Assessment and clearly demonstrates that; <ul style="list-style-type: none"> • There are numerous negative public domain view impacts. • The proposed tower does not follow the topography or form part of the existing built form and scale of the CBD. • Substantial adverse impacts to the amenity and views of workers, most notably in 2 Market Street has been entirely overlooked. • The excesses of the proposed tower and planning controls generally cannot be justified on the basis that they might screen another building considered less appealing. In reality the tower could be 9 storeys lower and still act as a screen. This would not impact the Hotel expansion. • As demonstrated, the proposal does, in fact, impact iconic views to Centrepont and Darling Harbour itself.



VIEW Q (JBA)
Distorted Aerial View Is Misleading

APPARENT LOCATION OF
2 MARKET ST BEHIND
PROPOSED TOWER



VIEW R
Actual View

ACTUAL LOCATION OF
2 MARKET ST BEHIND
PROPOSED TOWER

4.3 JBA ENVIRONMENTAL IMPACT STATEMENT

ITEM	COMMENTS
1.3 Analysis of Alternatives	
JBA claim that other building forms, including no development, were considered with the proposed development being both the best outcome and a positive built form for the site.	<p>In simple terms it is not surprising that an overdevelopment of the site that provides both extensive Hotel expansion as well as commercial office space is supported as it will give the best return to the owners.</p> <p>Consequently any alternative that didn't maximise return would not be acceptable and therefore could not be supported.</p> <p>Clearly however an alternative of substantially lesser height, greater setbacks and increased separation could still offer all the Hotel functions required while dramatically improving impacts on the City, the urban fabric and shared amenity.</p>
2.2, Fig 2 Site Plan	
The aerial view used by JBA is unfortunate as it (possibly inadvertently) is highly deceptive and misleading with regard to some critical issues.	<p>On examination it can be seen that the photo is not taken from directly overhead but from north of the site. The distortion means that buildings and spaces are not properly represented.</p> <p>For instance, the Hotel currently terminates at the north end of the Corn Exchange whereas in the photo it appears that they overlap. Refer View Q. As a consequence the proposed tower site looks quite small whereas it is in fact double the land area visible. Refer View R.</p> <p>Further because the roof to 2 Market Street is not over its base it appears as if it might look past the proposed tower to Darling Harbour. The fact is the new tower is squarely in front of 2 Market and blocks all of its direct views.</p>
3.3 Design Principles	
<p>The JBA relies on the Architectural Design Statement to support the design.</p> <p>Design Principles as such are not discussed.</p>	<p>Section 3.0 of this Report sets out some of the key Urban Design Principles that the proposed design would be expected to follow.</p> <p>Section 4.1 reviews the Architectural Design Statement and identifies several aspects of it which can be readily challenged. With regard to the JBA Summary this Report contends that;</p> <ul style="list-style-type: none"> • The built form clearly does not respond to the CBD built form

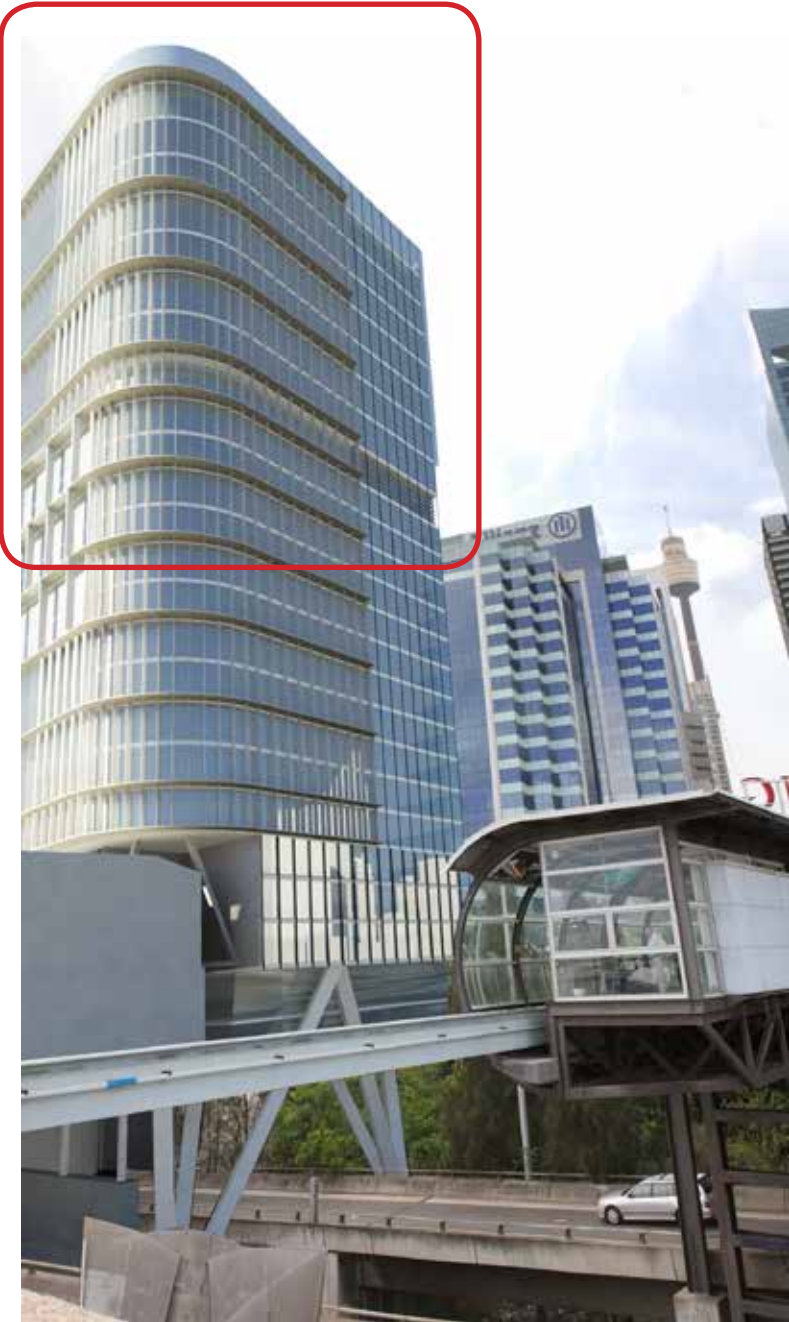


DIAGRAM 4
Vista Obstruction



VIEW S1
Top Of Steps To Pymont Bridge - Existing View

MAJOR LOSS OF SKY.
PROPOSED TOWER DOMINATES LOCATION.
VIEW ILLUSTRATES NEGATIVE
TOPOGRAPHICAL RESPONSE.



VIEW S2
Top Of Steps To Pymont Bridge - Proposed View

ITEM	COMMENTS
	<p>morphology and topography. Refer Diagram 1.</p> <ul style="list-style-type: none"> • The SE corner condition is not well resolved. Refer View A. • The new tower does not provide an effective frame to Darling Harbour or City Gateway. Refer View K. • The current podium design does not provide a suitable backdrop for Darling Harbour. Refer View 02. • The proposed tower height is excessive. Refer View M. <p>Finally, by omission it would appear that JBA do not agree that screening of an existing building on the basis of visual appeal is a reasonable design principle.</p>
5.2 Urban Design and Built Form	
“The height of the proposed tower continues the stepping of the built form from north to south along the western side of Market Street”.	<p>The submission claims the tower height can be justified as a link to the Darling Park Towers. The building heights in the latter development were controversial at the time. That development however delivered major public benefits including;</p> <ul style="list-style-type: none"> • an exceptional public garden • extensive public lounge areas and relaxation areas unrelated to any commercial activity • service retail facilities • food court • disabled access and enclosed link to Darling Harbour <p>The proposed development does not offer such benefits. At the same time it ignores the topographical response required of it in the north-south direction to the detriment of the public and the amenity of its neighbours.</p>
“The tower form has been designed as an urban marker for the entry point into the CBD from Pymont Bridge. Together with Darling Park Tower 1 frames vistas towards Darling Park”.	<p>The discussion of the tower as a marker is simply a reverse justification for its excessive height.</p> <p>Further JBA's Figure 16, refer Diagram 4, demonstrates very clearly that the most significant public domain view from Market Street is not revealed but obscured by the proposed tower, the reverse of the claimed outcome.</p>
“The new tower has been designed to directly connect to the existing building rather than being physically or visually separated”.	<p>This is justified on the basis of the functionality of the Hotel. Direct connection could still be achieved for most levels while at the same time providing the physical and visual separation sound planning and design principles demand.</p>



Figure 18 – Montage view from Pymont Bridge



Figure 20 – Montage view from Market Street pedestrian ramp

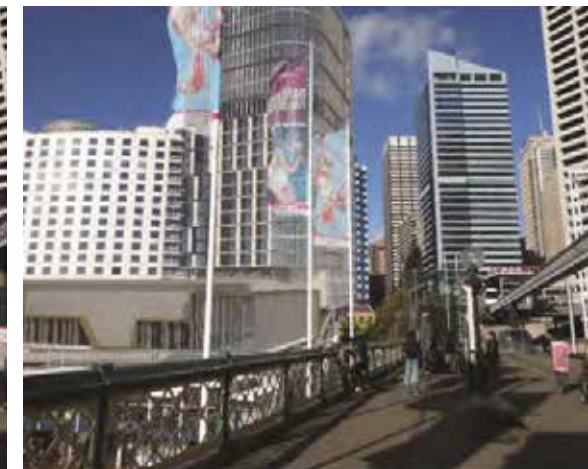


Figure 21 – Montage view from Pymont Bridge close to the site

Figure 26 – View from eastern end of Pymont Bridge



Before



After

Figure 27 – View from middle of Pymont Bridge



Before



After

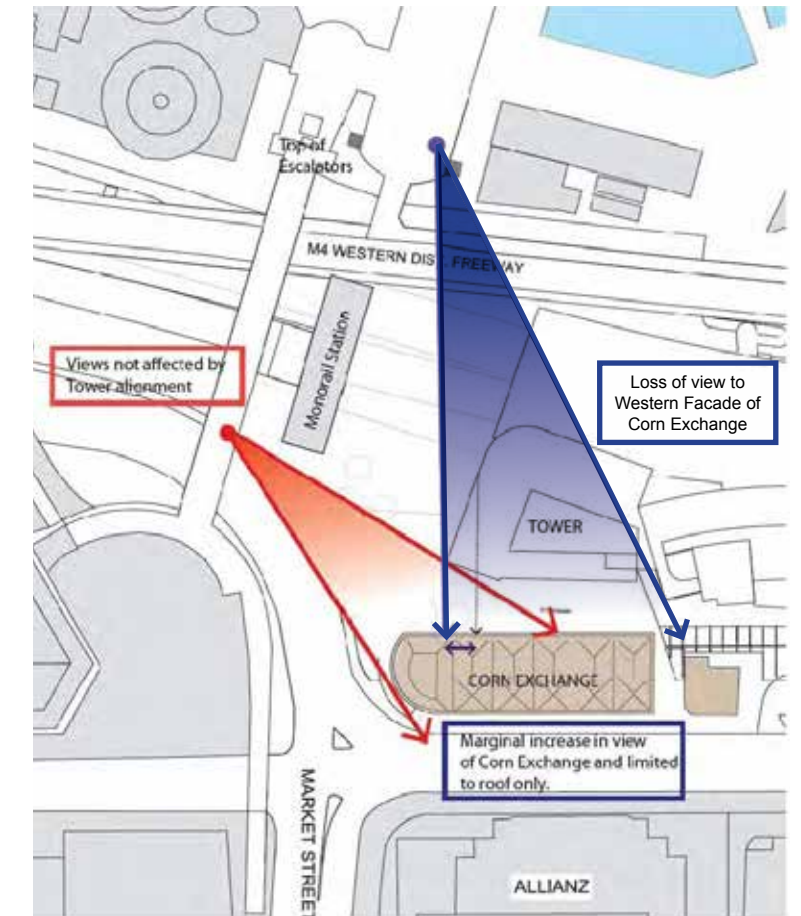


Figure 28 – Plan showing the marginal change in views to the Corn Exchange when the proposed tower is cut back.

ITEM	COMMENTS
5.3/5.4 Visual Impact & Heritage	
The JBA EIS references the GMU Assessment to justify acceptable visual impact.	<p>The GMU Assessment has been reviewed at length in Section 4.2. Numerous aspects of the Report have been questioned. With regard to the images highlighted in the JBA EIS;</p> <p>Fig 18 - Despite the remoteness of the view on Pymont Bridge this image demonstrates the proposed tower's excessive height obscures buildings high on the York Street ridge line.</p> <p>Fig 19 - It has been demonstrated that this view (refer View J) is taken from wrong location to minimise visual impact of the tower. The view from the SE corner of the Market/Kent intersection (refer View K2) demonstrates that the proposed tower dramatically narrows the available vista and obscures views to iconic Darling Harbour landmarks including the Australian Flag and the Maritime Museum.</p> <p>Figs 20 & 21 - Clearly demonstrate the massive bulk imposed by the excessive tower height and negative street wall effect resulting from inadequate building separation. The negative topographical response is also demonstrated.</p> <p>Fig 26 - This view demonstrates that No.1 and No.2 Market Street already create a strong visual gateway. The proposed tower only confines the view while its excessive height becomes readily apparent.</p> <p>Fig 27 - Demonstrates loss of iconic view to Centrepont Tower, negative topographical response and loss of sky.</p> <p>Fig 28 - Unfortunately this image failed to show the major loss of the view to the western façade of the Com Exchange from the end of Pymont Bridge (refer Views S1 & S2).</p>



VIEW T1
2 Market St - Existing View From L10



VIEW T2
2 Market St - Proposed View From L10



VIEW T3
2 Market St - Existing View From L15



VIEW T4
2 Market St - Proposed View From L15



VIEW T5
2 Market St - Existing View From L20



VIEW T6
2 Market St - Proposed View From L20



VIEW T7
2 Market St - Existing View From L24

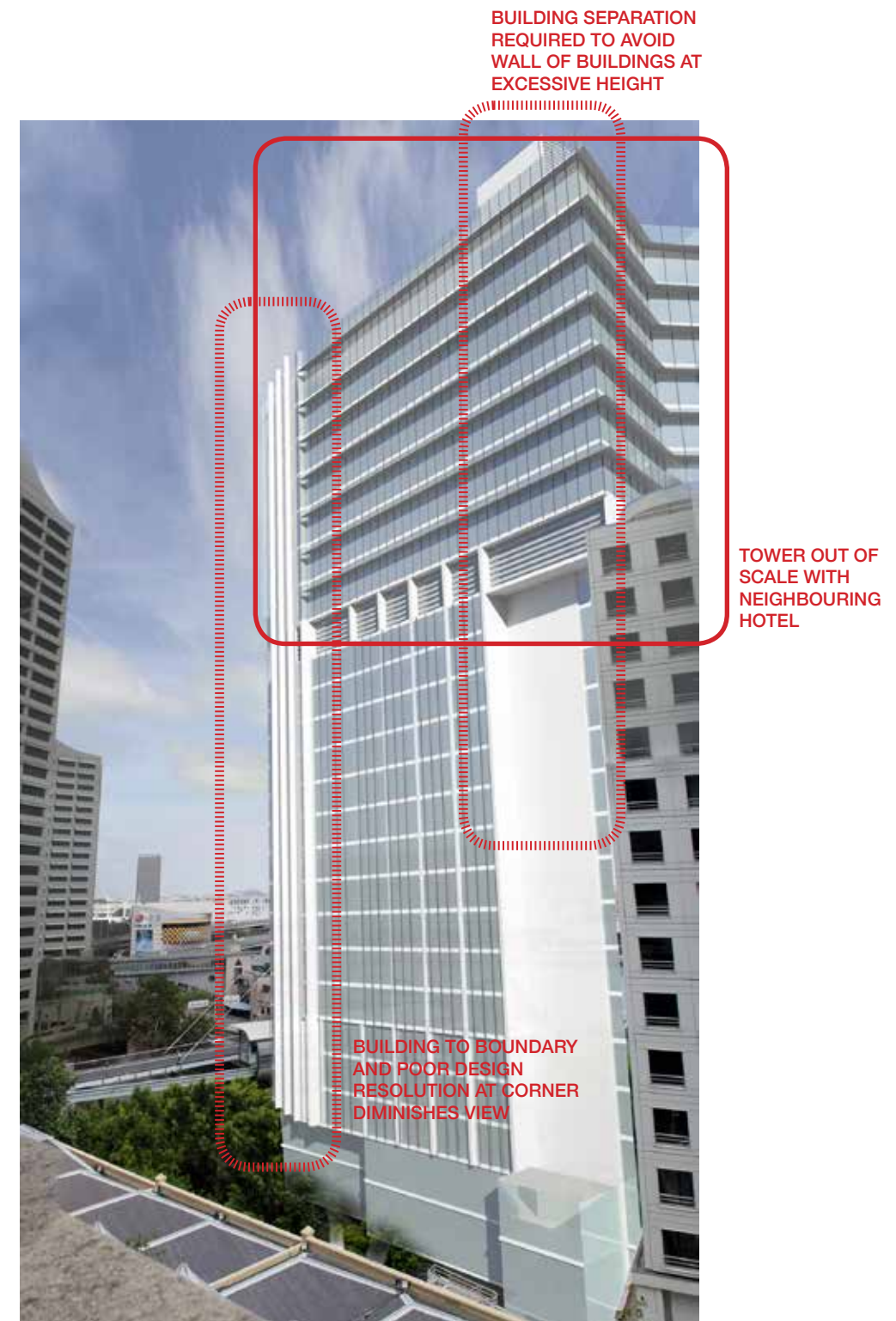


VIEW T8
2 Market St - Proposed View From L24

ITEM	COMMENTS
5.3 Private Views and Amenity	
<p>The JBA EIS only considers the private views of the residents of the Berkley at 25 Market Street (The submission documents incorrectly give the address as 26 Market Street).</p> <p>There is no discussion of views lost by commercial buildings along the east side of Market Street or the related concept of shared amenity.</p>	<p>No.2 Market Street, The Allianz building, and its occupants, and to some extent the occupants of 383 Kent Street adjacent are the ones most affected by the Development Proposal.</p> <p>The overdevelopment of the site with a tower of excessive height, inadequate setbacks and lack of separation has a devastating effect on the amenity of these neighbouring buildings including their lookout and views.</p> <p>Further, the proponents attempt to justify that this loss of amenity is acceptable on the basis that 2 Market Street might lack visual appeal (and need screening from view) appears to be nothing more than arrogance. This assessment is not based on fact, is not supported on the basis of sound urban design principles and cannot be supported on the basis of equality or shared amenity.</p> <p>Views T1 to T8 demonstrate the impact of the proposed tower on the neighbouring views from 2 Market Street.</p> <p>Views U1 and U2 demonstrate the tower impact on the view from L7 383 Kent Street.</p> <p>The photomontages in Views T and U demonstrate the overdevelopment of the tower site and the need to introduce separation between the building elements, reduce the tower height and introduce a boundary setback to Market Street.</p>



VIEW U1
383 Kent St - Existing View From L7



VIEW U2
383 Kent St - Proposed View From L7

ITEM	COMMENTS
6.0 Mitigation Measures	
The JBA EIS bases its requirements for mitigation measures on associated consultant reports. Understandably the mitigation measures identified support the proposed scheme and its architectural envelope.	<p>As the JBA EIS is based on its own associated consultant reports it does not recognise issues raised in this report and resultant mitigation measures that would be required.</p> <p>Accordingly, issues identified in this report that require review are not considered. These include;</p> <ul style="list-style-type: none"> • Tower height • Tower separation • Boundary setbacks • Impact on Public Domain • Loss of Vistas • Loss of iconic views and precinct identification • Loss of Views • Shared Amenity
7.0 Justification and Conclusion	
<p>In reference to the proposed design JBA states that;</p> <ul style="list-style-type: none"> • “The redevelopment establishes a building form with appropriate scale and massing that responds to the CBD built form morphology and topography”. • “The tower building addresses its corner location through an articulation of the southern and western facades...” • “The redevelopment will not have any significant environmental impacts”. 	<p>In response;</p> <ul style="list-style-type: none"> • This has clearly been shown not to be the case. The scale is inappropriate and the proposal runs counter to CBD topography. • Equally important is the SE corner of the tower which is not well resolved. • Again this has been clearly demonstrated not to be the case. Refer 6.0 above.

5.0 CONCLUSION

This Report commenced with a discussion of general Urban Design Principles followed by a detailed assessment of the submissions made by the Architect, Statutory Planner and Visual Impact specialist in support of the proposal.

The Urban Design Principles were used consistently as a reference for the assessment of many of the major claims made by the development's proponents.

Particularly, the proposed development has been shown to be excessive or has failed in the various key indicators identified. Notably;

- The building height is excessive and does not respect the CBD topography or the height generally of development on the western side of Sussex Street (with the exception of Darling Park).
- The proposed new tower is not separated from the tallest portion of the neighbouring Hotel to which it adjoins and consequently presents an unacceptable building mass and length to Sussex Street and Darling Harbour at high level.
- The building is not setback from its Market Street boundary which adds to the overall length of the development and its excessive bulk.

Together these attributes do not "protect and enhance the amenity of residents, workers and visitors" (City of Sydney LEP 2005).

Additionally, and of particular concern is loss of quality and amenity of the public domain;

- The Market Street vista to Darling Harbour is substantially lost.
- Iconic views to the Australian Flag, the Maritime Museum and Centrepont Tower are lost
- The new tower proposal is awkwardly appended to the existing Hotel and high quality urban design and relationships to neighbouring development are not achieved.
- Key vistas and views to and from Darling Harbour have not been protected and enhanced.

As a consequence of the above it is apparent that Design Excellence has not been achieved by this proposed development.

Major remodelling of the Hotel addition is required to reduce height, mass and bulk and to ensure preservation of the amenity of neighbours.

Attachment 2
Review of Heritage Impacts
Prepared by RPS



MEMORANDUM

Date:	16 October 2012
To:	Tom Skotadis (CBRE Pty Ltd)
From:	Joanne McAuley (Senior Cultural Heritage Consultant, RPS)
Subject:	Heritage Review Submission relating to lodged DA for 161 Sussex Street, Darling Harbour

1.0 Introduction

RPS has been engaged to prepare a submission on the lodged Development Application (DA) for a mixed used commercial and hotel development at 161 Sussex Street on behalf of the landowner at 2 Market Street. The site contains four heritage items listed on the State Heritage Register including the Corn Exchange Building, the Dundee Arms Hotel Building, former produce stores and warehouses.

RPS has been asked to carry out a desk-top review of the DA with regard to heritage and archaeological matters. In particular this review has focused on likely impacts on the heritage significance of the Corn Exchange Building and the Dundee Arms Hotel. This memo sets out the findings of this review.

This heritage submission has been prepared by Joanne McAuley (Senior Cultural Heritage Consultant) and Erin Williams (Archaeologist) with overall review provided by Darrell Rigby (Cultural Heritage Manager).

2.0 Background

2.1 The Proposed Development

The site located at 161 Sussex Street is within the Darling Harbour Precinct which is classed as a State Significant Site (as identified by Schedule 2 of the *State Environmental Planning Policy (State and Regional Development) 2011*). The Department of Planning and Infrastructure is the consent authority for the DA and Director General Environmental Assessment Requirements (DGRs) have been prepared.

The development proposal includes a 25 storey tower at the southern end of the site (directly to the rear of the Corn Exchange Building), a convention, conference and exhibition podium building constructed above the Western Distributor freeway and the upgrade of the Sussex Street frontage to the Four Points by Sheraton Hotel.

The development site's Sussex Street frontage includes four buildings included on the State Heritage Register (SHR). These are the Corn Exchange (173-185 Sussex Street), the Dundee Arms Hotel (171 Sussex Street), the former produce stores at 139-151 Sussex Street and warehouses at 121-127 Sussex Street. As discussed below, the development proposals will only directly impact on the heritage significance of the Corn Exchange and the Dundee Arms Hotel.

The DGRs relating to the DA include a section on heritage (Section 4) which requires the preparation of a Heritage Impact Statement (HIS) as part of the DA submission. In particular, Section 4 'Heritage' of the DGRs requires the HIS to consider the likely impacts of the proposals on 'heritage and archaeological items' including:

- *the relationship to adjoining heritage items, the Corn Exchange and Dundee Arms Hotel and the impacts on the western elevation and setting of the Corn Exchange;*
- *construction and operational impacts on adjoining heritage items;*

- *assessment of the impacts on views to and from adjoining heritage listed buildings;*
- *natural areas and places of Aboriginal, historic or archaeological significance and consideration of wider heritage impacts on the surrounding area;*

The DA submission includes a 'Heritage Impact Statement & Archaeological Assessment' by City Plan Heritage (May 2012). This document as well as the proposal plans, visual impact assessment report (GMU, June 2012) and the Architectural Design Statement (Cox Richardson, 22nd June 2012) have been reviewed in the preparation of this submission.

2.2 Statutory Planning Requirements

In addition to section 4 'Heritage' of the DGRs noted above, the *Darling Harbour Development Plan No. 1* (29 March 1996) contains a number of heritage-related statutory planning requirements which are specific to the Corn Exchange building. Of particular relevance to the development proposal is Clause 11 'Development in the vicinity of the Corn Exchange', Part (2) of which states,

In determining an application for a permit for the carrying out of development on the land to which this clause applies, or for the renovation or demolition of any building situated on that land, the Authority shall take into consideration the effect of the proposed development, renovation or demolition on the heritage value of the Corn Exchange.

It is also worth noting that a Conservation Management Plan (CMP) has been prepared for the Corn Exchange (Tanner Architects, April 2008) which has been reviewed to inform this submission. Section 7 of the CMP contains 'Conservation Policies' which are intended to enable the ongoing use, maintenance and conservation of the site. The policies do not deal in any detail with development beyond the footprint of the building; however, Policy 7 relating to the retention of significance is worth noting:

Policy 7

The statement of significance should be adopted as the basis for heritage management. All decisions should consider and seek to retain the values identified in the statement of significance (Tanner Architects 2008: 92).

The statement of significance contained in Section 4.2 of the CMP includes the following assessment of the Corn Exchange building's contribution to the streetscape and locality:

With its distinctive curved facade and roofscape, albeit modified, it is a landmark building that contributes to the built heritage definition of the western city portal to the City together with the other remaining buildings of this era in Sussex Street (Tanner Architects 2008: 66).

3.0 Heritage Considerations

The principal heritage considerations or matters raised by the development proposal are identified comprehensively in the DGRs and are summarised below:

- **Setting** – the relationship between the new development and those buildings within the site included on the State Heritage Register, in particular the Corn Exchange and Dundee Arms Hotel. A review of the development proposals and DA submission with regard to likely impacts on setting is set out in Section 5.1.
- **Fabric** – the constructional and operational impacts on adjacent heritage items. In other words the proposed and potential impacts on the fabric of the heritage items as a result

of proposed alterations and construction activities. A review with regard to likely impacts on fabric is set out in Section 5.2.

- Views/Visual Impact - the likely visual impact of the proposed development and in particular, how the proposed tower will alter the character of key views in which the Corn Exchange features. As noted above, the role the building plays in the streetscape forms part of its heritage significance. A review with regard to the likely impacts on key views to the heritage item is set out in Section 5.3.
- Archaeology – historical and Indigenous archaeological considerations as well as wider heritage impacts on the surrounding area. Section 6.0 below contains a comprehensive review of the archaeological assessment component of the HIS submitted as part of the DA submission.

4.0 Heritage Impacts

The DA submission material has been reviewed and RPS has reached the conclusions set out below with regard to the likely heritage impacts of the development proposals at 161 Sussex Street.

Cross reference is made throughout this assessment to findings in the DA submission reports, in particular the 'Heritage Impact Statement & Archaeological Assessment' by City Plan Heritage (May 2012) (hereafter the 'HIS').

4.1 **Setting**

The DGRs require that the HIS consider the relationship between the new development and the Corn Exchange and Dundee Arms Hotel as well as the setting of the Corn Exchange. The terms 'setting' and 'curtilage' are often interchangeable; however, 'Heritage Curtilages' ((former) Heritage Office, 1996) defines curtilage as '*land which is integral to the heritage significance of items of the built heritage*'.

The heritage curtilage of the Corn Exchange (as noted in the SHR citation) has been drawn tightly around the footprint of the building. Nonetheless, as stated in the Corn Exchange CMP (Tanner Architects, April 2008), '*The greater visual curtilage is therefore defined by the interface of the building with the Market and Sussex streets intersection and the western frontage to Darling Harbour*' (Section 4.3 'Curtilage').

Whilst discussing the heritage significance of the Corn Exchange, it is also worth noting the building's rarity value and architectural calibre as noted in the SHR citation:

The Corn Exchange is the earliest remaining market building in Sydney. It was designed by the noted architect George McRae, who later designed the Queen Victoria Building ((former) Heritage Office, 2002).

The proposed new relationship between the existing hotel and the Corn Exchange and Dundee Arms Hotel buildings referred to in the DGRs will be as a result of new linkage through the site accessed via the opening between the two buildings. This 're-interpretation of Wharf Lane' as it is referred to in the DA documentation is considered to be a 'heritage benefit' delivered by the proposals. It is understood that the design details remain at the concept stage but that minor alterations to the fabric of the two SHR buildings are proposed (see 5.2 below).

With regard to the likely impact of the proposals on the setting of the Corn Exchange, the proposed tower will have a significant impact on its immediate and wider visual setting as a result of its **starkly contrasting scale, form and materials**.

It is considered that this will in turn impact upon the heritage significance of the building. The statement of significance within the SHR citation for the Corn Exchange notes that it is '*a landmark building; forming part of the city portal at Pyrmont Bridge*'. Although the proposed tower will be physically separate and read as a backdrop to the Corn Exchange (when viewed from the east), it is considered that its prominence in views and 'landmark status' will undoubtedly be diminished as a result of its construction.

The current context of the Corn Exchange and the neighbouring heritage listed buildings on Sussex Street is characterised by dense, large scale development befitting its CBD location. The open backdrop to the Corn Exchange is the exception to the rule in this location.

It is considered that the visual curtilage or setting of the Corn Exchange will be substantially altered as a result of the proposed 25 storey tower. This is a significant heritage impact which is understated in the HIS. This impact on the building's visual curtilage is best understood by looking at the results of the visual impact assessment (GMU, June 2012) and in particular, the likely impact of the development on immediate views which feature the Corn Exchange from the east and west.

There is considerable overlap between impacts on setting and visual impacts. The likely impacts of the development on key views are discussed in detail in Section 4.3 below.

4.2 Fabric

The DA proposal plans do not show in any detail the proposed alterations to the Corn Exchange and Dundee Arms Hotel to enable the insertion of a covered canopy over the reinstated Wharf Lane. It is understood from the HIS that this aspect of the proposal remains at the 'preliminary concept design stage' and that they will entail 'minor physical works'. On the basis that the proposals are minor and that they do not impact on fabric identified as significant in the CMP, it is considered that the proposed physical works would not impact on the heritage significance of the aforementioned SHR buildings. Nonetheless, the DA submission material is of insufficient detail to make a judgement on this heritage consideration.

4.3 Views/Visual Impact

The proposed development, in particular the proposed 25 storey tower, will have a dramatic impact on the way in which the Corn Exchange will be read in the streetscape and its wider visual curtilage or setting. This significant impact will be appreciable in key views of the Corn Exchange from within its immediate context.

This is illustrated in the Visual Impact Assessment (GMU, June 2012) and in particular, photomontages showing the development from viewpoint I4 on Pyrmont Bridge as well as viewpoint I3 from the corner of Market and Sussex Street (as shown below).



Figure: View I3 showing the existing view from Market Street to the Corn Exchange.
Source: GMU



Figure: View I3 showing a montage of the proposed development from Market Street to the Corn Exchange.
Source: GMU



Figure: View I4 showing the existing view from Pymont Bridge.
Source: GMU



Figure: View I4 showing a montage of the proposed development from Pymont Bridge.
Source: GMU

4.3.1 Consideration of impact on immediate views from the west

The HIS considers that the screening of the Corn Exchange by the proposed tower in views from Pymont Bridge is the only heritage impact of the proposal:

‘The screening of a portion of the existing views from the Pymont Bridge approaches to the top level and roof of the Corn Exchange building on the west will be the only heritage impact from this State Significant Development’ (City Plan Heritage 2012: 4).

Furthermore, this impact, which is not referred to as adverse in the HIS, is considered to be acceptable because current views are ‘secondary’; already compromised by existing vegetation and the monorail; and, that realignment of the tower would only achieve a marginal increase in the view corridor.

Evidence in the CMP suggests that views of the Corn Exchange from Pymont Bridge were historically significant as the building features in a number photographs dating from the early 20th Century. The building’s original, distinctive roof form drew the eye. Although this original roof form has been altered, it remains distinctive and appreciable in local views as shown in the recent photographs, taken 8 October 2012, featuring the building below.



Plate 1: View of the Corn Exchange from Pyrmont Bridge looking east
Source: RPS



Plate 2: View of the Corn Exchange from pedestrian overpass over the Western Distributor looking north east
Source: RPS.

As shown in the photomontage for Immediate View I4 of the Visual Impact Assessment, **the loss of the Corn Exchange's prominence in views from the west is considered to be a negative heritage impact of the proposed development.**

4.3.2 Consideration of impact on immediate views from the east

The impact of the proposed development on views of the Corn Exchange from immediately to the east within its Sussex Street context is given relatively little attention in the HIS. Indeed, there is considered to be no impact on views from this location:

The main views and vistas to the item (the Corn Exchange) from Market Street and Sussex Street where the Queen Anne style architecture of the building is most obvious and appreciated, will not be affected. (City Plan Heritage 2012: 8).

Whilst it is true that the facade of the building will remain fully legible if the tower is constructed, it is not the case that the views and vistas which feature the building will not be altered. The introduction of the tower will dramatically change the character of the view and draw the eye away from the Corn Exchange. In other words, the building's current dominance in the view will undoubtedly be reduced. In turn, the character of the building's visual setting will be adversely impacted.

As noted earlier, the currently open backdrop to the Corn Exchange affords the building prominence and distinctiveness in what is a heavily built up location where generally, smaller scale heritage buildings are closely juxtaposed with tall buildings. Plates 3 and 4 below illustrate the building's prominence with its open backdrop as compared to the neighbouring buildings which have the current hotel development as a backdrop.



Plate 3: View of the Corn Exchange looking northwest from the junction of Sussex and Market Streets
Source: RPS)



Plate 4: View of the Dundee Arms and the northern edge of the Corn Exchange looking north along Sussex Street
Source: RPS.

The HIS findings with regard to immediate views from the east are considered to be at odds with the findings of the Visual Impact Assessment (GMU, June 2012) which identifies the view from the corner of Market and Sussex Street (intersection of the Corn Exchange) to be the only one to be impacted at a ranking of 'medium to high'.

Although the Visual Impact Assessment finds that the impact is '*high but acceptable*', it is noted that in the definitions of the various levels of heritage impact, 'high visual impacts' are described as those which will '*result in an overbearing form or scale not envisaged in controls and where such an impact is adverse to the amenity and visual qualities of the area*'.

It is considered that the local streetscape views of the Corn Exchange from the east will be significantly impacted as a result of the proposed tower and that this constitutes an adverse heritage impact. The prominence of the Corn Exchange in the view will be diminished because it will no longer be read as the main feature at the corner. In turn, the immediate visual setting will be changed irrevocably.

5.0 Archaeological Assessment

5.1 Methodology

Each section of the Heritage Impact Statement and Archaeological Assessment for the Four Points by Sheraton Hotel Expansion (City Plan Heritage, May 2012) (hereafter the 'HIS') was examined and assessed using the following criteria:

- Quality and quantity of the information provided;
- Consistency of the information provided;
- Accuracy of recorded detail;

- Compliance with requirements of the Heritage Act (1977) NSW, National Parks and Wildlife Act (1974) NSW, and guidelines prepared by NSW Heritage Office and Office of Environment and Heritage; and
- Consistency with requirements of the relevant legislation for the production of archaeological assessments.

5.2 Review of HIS findings

5.2.1 Physical Evaluation

There is nothing in the HIS to indicate that a site inspection for the purposes of archaeological assessment was undertaken. The HIS provided no evaluation of the impact of later structures on earlier features, did not examine records of other disturbances (e.g. borehole data provided in geotechnical report as part of the same Development Application), or make an extensive review of data from adjacent sites.

Geotechnical testing on the site in association with the proposed development indicated that there was at least 1.7 metres of fill and accumulated cultural material across the site, which included sandstone, ironstone, brick, glass, plastic, blue metal, concrete, and some wood fragments. The concrete and brick may indicate the floors of demolished buildings.

Recommendation: It is recommended that City Plan Heritage consider the findings of the geotechnical report which accompanied the DA.

6.2.2 Synthesis

City Plan Heritage collated evidence and overlaid key plans, which indicate extensive subsurface archaeological features on the site, but fail to properly examine the potential impact of later activities on earlier features.

City Plan made an assessment of the development history of the site, combined with a brief assessment of the natural historical environment and landscape, and appraisal of the types of Aboriginal cultural heritage sites likely to exist with the history of development in the area. They concluded that the site is not likely to contain sites or places relating to “previous Aboriginal cultural heritage significance” (City Plan Heritage 2012: 74).

City Plan’s assessment of European archaeology on the site was contained conflicting information and is considered to be inadequate. They conceded that the site has a long history of development since the mid nineteenth century, including four late nineteenth century three-storey brick buildings in the south western part of the site (the only area to be impacted by the Four Points by Sheraton proposal). They stated:

As these buildings appear substantial, there would be potential for their archaeological remains to be retained on site..(City Plan Heritage 2012: 64).

In contradiction, in the following paragraph they stated:

...while the historical development of the area is well documented, the series of impacts on this part of the Cockle Bay Archaeological Precinct are considered to have been of such impact that there is no potential for earlier remains to still remain across this part of the subject site. Therefore the recommendation is that no further historical archaeological works are required with this particular proposal (City Plan Heritage 2012: 64).

Recommendation: That City Plan Heritage review their report to improve consistency, and modify their statements accordingly.

6.2.3 Assessment of significance of archaeological resource

City Plan acknowledged that the subject site has strong historical, social and physical connections, but discounted any potential for the site to reveal any information that would contribute to the cultural or natural history of the local area, and stated:

The site has a long history of occupation and re-development since pre-settlement. However, while the history of the site... involves early associations with Darling Harbour and stores buildings, the subsequent massive developments have impacted on any potential for archaeology from the earlier phases (City Plan Heritage 2012: 66).

Assessment of prior archaeological works in the area and their findings was not included in the City Plan report.

Recommendation: Examples of nearby archaeological works on similarly disturbed sites that City Plan Heritage might have discussed include:

- **KENS Project (Kent, Erskine, Napoleon and Sussex streets) (Dominic Steele)**
Low archaeological expectations due to extensive prior development on the property; a number of small trenches revealed almost 1,000 Aboriginal artefacts including stone flakes, other stone tools and some raw materials that were not sourced from the immediate Sydney area and may indicate trading networks.
- **Darling Walk, Cockle Bay (Casey and Lowe)**
Archaeological structures and events discovered at this site included the remains of an Aboriginal shell midden; a c.1820s slipway built from roughly worked logs; timber fences associated with Captain Brooks' slaughterhouse and lands dating from the 1820-30s; the remains of Barker's 'finger wharf', sections of which survived under more than a metre of fill; partial remains of Barker's mill pond and evidence of its subsequent infilling with municipal rubbish in the 1860s; evidence of extensive reclamation dating from the late 1830s; workers' housing constructed during the mid-nineteenth century; the remains of a house and other buildings associated with Hughes' Soap and Candle Manufactory at Murphy's Wharfage dating from the late 1840s; and the remains of the PN Russell boiler house built in 1860 and a crane base associated with the Carriage Works.
- **Museum of Contemporary Art (Casey and Lowe)**
Casey and Lowe have undertaken a number of archaeological programs at this site, and found considerable evidence for the surviving docks in 1997, 1998, 2000 and 2008. Remains of three docks are known to survive within the area of the former MCA carpark and beneath the northern end of the MCA building, former Maritime Services Board building. The fourth and largest dock lies underneath Argyle Street.
- **Barangaroo (Comber Consultants, Casey and Lowe)**
An archaeological assessment prior to works predicted that there would be little intact deposit at the Barangaroo site and that the proposed works would be unlikely to disturb potential archaeology, yet excavation revealed evidence of nineteenth century reclamation, wharfage, stores, yards, and associated domestic occupation of the area.

City Plan Heritage did not offer any policy development or statement pertaining to the significance of archaeology on the subject site. Despite this, the report previously quoted the Sydney Heritage Foreshore Authority's recommended management of Cockle Bay Archaeological Precinct (listed under the Section 170 Register) as follows:

General: The subject area lies between Sussex Street and Darling Harbour. Most of the area is covered with new development from the 1988 Bicentennial project

and subsequent development. The archaeological potential of the subject site is high in some places, but may be completely lost in others. 2008-2009 archaeological excavation at the Darling Walk site has uncovered extensive remains, indicating that the extant resource is likely to be extensive. The area was subject to modification throughout its life, much of the site was significantly altered for the 1988 Bicentennial Development Project, leaving only archaeological remains. A thorough Archaeological Assessment for the area is recommended. [*underlined emphasis is ours]*

6.2.4 Review of HIS Findings

The archaeological assessment contained within the HIS is considered to be inadequate and to have several failings which are noted below.

- **The archaeological assessment is not thorough and does not meet the basic criteria for archaeological assessment** as outlined by the New South Wales Heritage Office (2002) or the Office of Environment and Heritage (2011).
- **Aboriginal Assessment is inadequate and does not meet the basic guidelines set out by the Office of Environment and Heritage** (2011) or the New South Wales Heritage Office (2002). In particular, **an extensive AHIMS search was not undertaken** (although recommended on p.75)
- The study area is situated on the Cockle Bay Archaeological Precinct, which is listed on the Sydney Harbour Foreshore Authority Section 170 Register. **The Precinct is deemed significant for the archaeological potential still extant, and is important for the information it may reveal about industrial and technological advances over almost a two hundred year period.**
- Cockle Bay was named for the large shell middens which stretched along the shoreline in the area, indicating Aboriginal use of the area, yet **City Plan state that the subject site “is not likely to contain sites or places relating to previous Aboriginal cultural heritage significance”** (City Plan Heritage 2012: 74).
- **The City Plan report clearly demonstrates the spatial and temporal extent of development on the property, yet discounts the possibility of any *in situ* archaeology on the site based on the assumption that it has been destroyed by subsequent development.** This is considered to be an inaccurate interpretation of the impact that the development will have on the subject area. Borehole data in the geotechnical report clearly demonstrates the level of fill across the site and the presence of historical material in the fill which may indicate *in situ* deposits.
- Archaeological evidence on the site may include that pertaining to Aboriginal use of the area; the development of the shipping port including Market Wharf, established by Macquarie in 1811; the early road alignment including the continuation and forming of Sussex Street (completed 1834); Government Ground which was subsequently subdivided and sold; and the development of commercial enterprises in the area.

7.0 **Conclusions**

7.1 **Built Heritage**

The development proposals include mitigation measures, principally in the form of heritage interpretation measures. It is understood from the Environmental Impact Statement (prepared by JBA) that, *the demand for commercial floor space, hotel accommodation and improved*

and for expanded convention facilities in Sydney have guided the proposed development. As such, there are clearly several factors which weigh in favour of the proposal. However, it is considered that the heritage impacts of the development proposal have been understated in the DA submission material, particularly the HIS.

Local views of the Corn Exchange from the east and west will be adversely impacted such that and the character of established views will be significantly altered and the visual prominence of the building will be diminished.

In views from the west from Pyrmont Bridge, a significant proportion of the Corn Exchange will be screened in what is an historically significant view of the building. In the case of local views from the east where the building features as a landmark corner feature in the streetscape, the introduction of a tower as a backdrop will diminish its landmark status and distinctiveness.

The introduction of a 25 storey tower directly behind the State registered Corn Exchange will undoubtedly significantly impact on the heritage significance of the building with respect to its wider visual setting and its prominence in established local views. These impacts are considered to be adverse or negative, words which are not used in the HIS at all.

7.2 Archaeology

RPS consider the site located at 161 Sussex Street has the potential to contain a range of archaeological deposits, dating from the prehistory of Australia to the early twentieth century, which may represent Darling Harbour's Aboriginal history and part of the early development of industry and urbanisation in Sydney.

In light of the fact that the archaeological assessment component of the HIS is considered to be inadequate and flawed, it is strongly recommended that a full assessment of Aboriginal and historic archaeological values should be prepared prior to this development application being determined.

Attachment 3

Review of Traffic and Parking Implications

Prepared by GTA



161 Sussex Street, Darling Harbour
Proposed Mixed Use Development
Review of Traffic and Parking
Implications

transportation planning, design and delivery

161 Sussex Street, Darling Harbour

Proposed Mixed Use Development

Review of Traffic and Parking Implications


Issue: A 25/10/12

Client: RPS Group

Reference: 13S1156000

GTA Consultants Office: NSW

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By
A	25/10/12	Final	Brigette Humphrey- Robinson	Rhys Hazell	

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1. Introduction

1.1 Background

GTA Consultants has been commissioned by RPS Group to undertake an independent traffic and transport review of the proposed mixed use development located at 161 Sussex Street, Darling Harbour.

The review will assist RPS Group in understanding the potential impacts of the proposed redevelopment on the surrounding road network and provide insight into some of the measures that may be considered to minimise the extent of the impacts.

The development proposal for the site as represented in the *Environmental Impact Statement – 161 Sussex Street Redevelopment, Sydney* prepared by JBA (dated August 2012) and submitted to the NSW Department of Planning and Infrastructure (DoPI) for initial determination is for a mixed use development over 25 storeys including 231 hotel rooms, 5,775m² of commercial floor space and 4,810m² of convention, exhibition and function space.

1.2 Purpose of this Report

The purpose of the review presented in this report, is to consider the impact of the future traffic generation, parking demand and accessibility characteristics of the development on the site within the context of the existing surrounding road network and the sites operational capacity to accommodate this anticipated demand.

This report sets out an assessment of the impacts of the proposal development represented in the EIS prepared by JBA and the *Transport and Accessibility Impact Assessment for Proposed 161 Sussex Street Redevelopment, Sydney* prepared by Colston Budd Hunt and Kafes Pty Ltd (dated 8 June 2012) with consideration for the following:

- i existing traffic and parking conditions surrounding the site
- ii suitability of the proposed (or lack of) parking in terms of supply (quantum) and layout
- iii service vehicle and bus/ coach requirements
- iv pedestrian and bicycle requirements
- v the traffic generating characteristics of the proposed redevelopment
- vi suitability of the proposed access arrangements for the site
- vii the transport impact of the development proposal on the surrounding road network.

1.3 References

In preparing this report, reference has been made to the following:

- an inspection of the site and its surrounds
- plans for the proposed redevelopment prepared by Cox Richardson, Revision C, 19/08/12
- Environmental Impact Statement prepared by JBA Urban Planning Consultants Pty Ltd
- Transport and Accessibility Impact Assessment Report prepared by Colston Budd Hunt and Kafes Pty Ltd, dated 8 June 2012

- Construction Impact Statement to the EIS prepared by Cadence Australia Pty Ltd
- Director General's Requirements (DGRs)
- Darling Harbour Development Plan and other state significant relevant planning controls
- other documents and data as referenced in this report.

2. Development Proposal

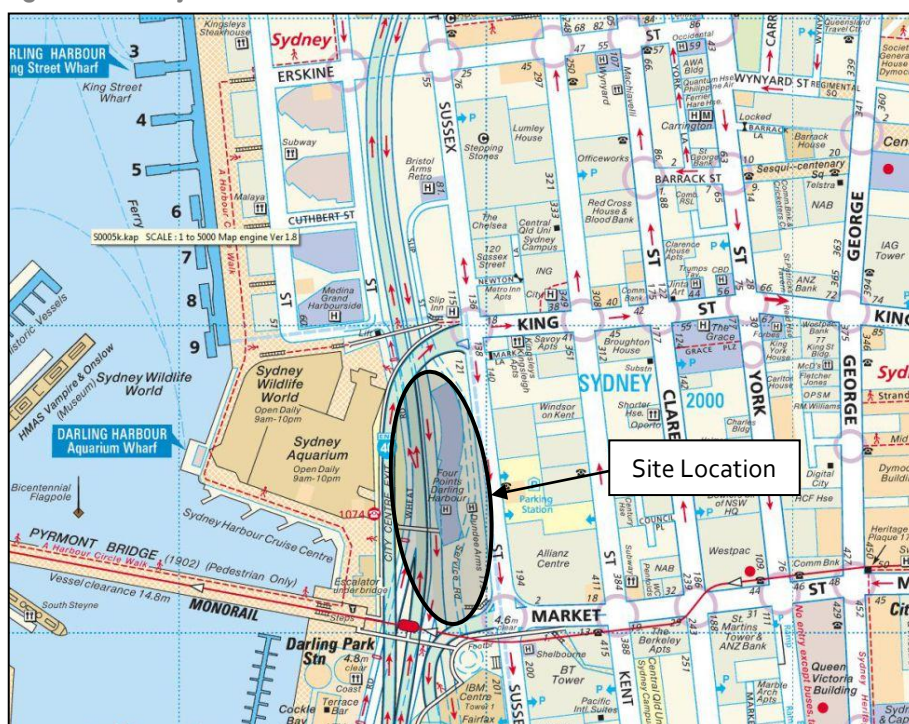
2.1 Site Location

The subject site is located at 161 Sussex Street, Darling Harbour and is currently occupied by mixed uses including the Four Points by Sheraton Hotel, commercial space, retail shops and restaurants. The site covers an area of approximately 11,200m² with the main frontage to Sussex Street while also extending over Slip Street and the Western Distributor. Four heritage listed buildings are also located along Sussex Street at the southern end. The site is located within the Darling Harbour Precinct and the relevant planning control is the Darling Harbour Development Plan.

The location of the subject site and its surrounding environs is shown in Figure 2.1.

The surrounding properties predominantly include high density commercial, retail and residential uses within Sydney's CBD.

Figure 2.1: Subject Site and Its Environs



(Reproduced with permission from Sydway Publishing Pty Ltd)

2.2 Land Uses

The development of the site includes construction of a mixed use development comprising an expansion to the Four Points by Sheraton Hotel within a 24 storey building with capacity for 231 rooms, 5,775m² of commercial space and 4,810m² of convention/ function space. Also included is the expansion of the existing Sussex Street porte cochere, public domain works within Slip Street and reconfiguration of the pedestrian link through to Darling Harbour, as summarised in Table 2.1.

Table 2.1: Development Schedule

Use	Size
Hotel	10,655m ² / 231 rooms
Commercial	5,775m ²
Convention/ Function	4,810m ²
Total	10,631.13m²

It is noted that the Transport and Accessibility Impact Assessment report assumes a convention/ function increase of 2,800m² while the JBA EIS states 4,810m². As such, the JBA EIS schedules of areas has been adopted for the purposes of this review given the August 2012 submission as opposed to the 8 June 2012 Transport and Accessibility Impact Assessment report date.

The hotel is proposed to be located on the lower levels over floors 1-14 with the commercial space to be located over the upper levels (levels 16-22). The convention, exhibition and function area is proposed to be located in an expanded podium which will overhang the Western Distributor.

The proposed redevelopment will expand on the existing 696 room hotel and associated function/ banquet facilities over approximately 1,160m².

2.3 Vehicle Access

Vehicular access to the site will be maintained as follows:

- Guest vehicles including all private cars, hire cars and taxis will access the site via the Sussex Street porte cochere. Set-down/ pick-up zones are proposed to be expanded in this area.
- Service vehicles including all garbage trucks and buses/ coaches will access the existing on-site facilities via the lower level along Slip Street.

The suitability of the proposed access arrangements is discussed in Section 3 of this report.

2.4 Car Parking

There is no existing on-site parking provision and the proposed redevelopment will provide no further on-site car parking spaces. Under the current arrangement hotel staff and guests receive parking permits to enter the Secure Car Park located opposite the site on Sussex Street. It is proposed for this arrangement to continue after the redevelopment.

No motorcycle parking spaces are proposed as part of the redevelopment.

The suitability of the car parking provision and layout is discussed in Section 3 of this report.

2.5 Pedestrian Facilities

Pedestrian accessibility will be improved to incorporate a public through site link across the Western Distributor to Darling Harbour adjacent to reception and the porte cochere. This will replace the existing pedestrian facility located external to and south of the site.

As part of the proposed redevelopment, Slip Street would be upgraded to improve pedestrian delineation in the area. The Transport and Accessibility Assessment report suggested that the removal of kerbs and the implementation of bollards in this area would be suitable for the large groups of people who access the site via Slip Street.

The suitability of the proposed pedestrian facilities is discussed in Section 3 of this report.

2.6 Bicycle Facilities

The Transport and Accessibility Assessment report states that in support of the cycling commuter mode share “appropriate bicycle parking and end-of-trip facilities will be provided in accordance with Council and DGR’s requirements.” However no further details are discussed and potential locations for the proposed bicycle facilities are not identified.

The requirements for bicycle provisions are discussed in Section 3 of this report.

2.7 Loading Areas

There are four existing loading bays located off Slip Street on the lower level of the hotel and at the rear of the site. The loading facilities accommodate a range of vehicle sizes from small commercial vehicles to large rigid trucks. No specific details are discussed in regard to vehicle sizes required to cater for the existing or future needs of the site.

It is proposed that the convention/ exhibition and function centre will be serviced by a 6 metre by 3 metre materials hoist located in Slip Street. Plans prepared by Cox Richardson indicate that this hoist may be located within the bus/ coach area however no further functional or design properties have been provided. The Transport and Accessibility Assessment report proposes that an operational traffic management plan be implemented with reference to this service hoist and that area will be managed by traffic marshals.

The suitability of the proposed loading arrangements is discussed in Section 3 of this report.

3. Review of Proposed Redevelopment

3.1 Car Parking

3.1.1 Adequacy of Proposed Parking Supply

The Transport and Accessibility Assessment report proposes no parking provision with justification sought from and considered in-line with the core objectives of the following documents:

- Metropolitan Transport Plan
- NSW 2021
- Integrated Land Use and Transport Policy Package (ILUT).

In summary, the aim of the above mentioned policy documents is to increase the mode share for cycling, walking and public transport and reduce the number of commuter trips made by private vehicles. As such, the Transport and Accessibility Assessment report indicates that the provision of no on-site parking will encourage staff and visitors to utilise existing public transport services that are easily accessible, being in close proximity to the site.

The lack of on-site parking is in accordance with the planning requirements for the area, specifically the details within the Darling Harbour Development Plan and does not result in non-compliance nor grounds for rejection.

3.1.2 Secure Car Park

The Transport and Accessibility Impact Assessment report indicates that the Secure car park, located opposite the site on the east side of Sussex Street provides parking for hotel guests by way of parking permits. The car park provides capacity for 745 vehicles within a multi-deck facility and car parking surveys were completed as part of the assessment over a typical weekday (Thursday 15 March 2012) from 7:30am to 9:30pm. The parking surveys concluded that the car park utilisation peaked in the middle of the day at 79% (590 spaces) with up to 155 vacant spaces with 76 parking permits (50 staff, 26 guests) issued. Given that the hotel had 630 rooms occupied on the day (91% capacity), the parking permit use represents 12% of hotel guests and staff alike. It was however not indicated as to whether the hotel was hosting any functions on the survey day.

Assuming all 696 rooms were to be occupied and with inclusion of an additional 231 hotel rooms, would result in a parking demand of 112 spaces, an increase of 36 spaces. Given this, the existing Secure car park would be capable of accommodating the increased demand and representative of a peak demand of 84% (626 spaces).

Assuming that no functions were held on the survey day, should a function occur during the middle of the day with 400 guests in attendance and assuming the same usage patterns, there could be an additional 50 cars parked in the Secure car park. This would result in a peak parking demand of up to 91% (676 spaces).

This is in excess of the proposed increase in parking demand detailed in the Transport and Accessibility Impact Assessment report and it is recommended that the applicant provide additional information in this regard.

3.1.3 Porte Cochere

Although the Transport and Accessibility Impact Assessment report indicates that surveys concluded that the existing porte cochere generates up to 100 vehicles per hour (two-way) (50 in, 50 out) during the AM peak period, there is no discussion on the capacity of the of the facility to accommodate such activity. Given that it provides capacity for up to 6 parked vehicles, with a through traffic lane, more detail as to the maximum vehicles in the porte cochere (at the peak) and any subsequent queuing would provide a more informed representation of the operating characteristics and the capacity to accommodate the proposed redevelopment.

It is also understood that the porte cochere is proposed to be expanded to accommodate 8-10 parked vehicles while maintaining a through traffic lane. A swept path assessment to illustrate this could not be found as part of this review.

In addition, on-site observations confirm that vehicles exit the Secure car park to enter the porte cochere, a manoeuvre that requires vehicles to traverse 3-4 traffic lanes. This would be expected to increase as a result of the redevelopment and likely to result in safety concerns, particularly during the peak AM period where on street traffic will need to mix with guests when checking out of the hotel. Queuing on Sussex Street on approach to Market Street also complicates this scenario.

The applicant needs to provide additional information in this regard.

3.1.4 Taxi Rank

The existing taxi rank located north of the porte cochere on the Sussex Street western kerb has capacity for up to 6 taxi's. The taxi at the front of the queue is automatically called via a call sign within the porte cochere to pick-up guests. This was observed to be at capacity during a weekend (off-peak) period and may exceed capacity during peak periods subsequent to the redevelopment. Should this occur, the taxi queue would extent to the adjacent through traffic lane and potential affect the operational capacity of the Sussex Street/ King Street intersection located further north. It is also noted however, that any expansion to the taxi zone would be difficult given the parking constraints within the CBD.

The applicant needs to provide additional information in this regard.

3.2 Bicycle End of Trip Facilities

The requirement for bicycle parking is typically linked to the gross floor area (GFA) however an initial review of the proposed redevelopment plans does not indicate the provision of formal bicycle parking or associated end of trip facilities. The Transport and Accessibility Assessment report states that appropriate bicycle parking and end of trip facilities will be provided though no details are included as to the number and extent including location, accessibility, lockers, showers, change rooms etc.

The City of Sydney Draft DCP 2011 sets out the requirements for bicycle storage. A review of the bicycle storage rate and the floor area schedule results in a bike storage requirement for the proposed redevelopment as summarised in Table 3.1.

Table 3.1: Draft DCP 2010 Bike Storage Rates

Description	Use	Size	Draft DCP Parking Rate	Draft DCP Parking Requirement
Commercial	Commercial Premises	5,775m ²	1 spaces / 150m ² GFA for staff	39 spaces
			1 spaces / 400m ² GFA for visitors	15 spaces
Hotel	Serviced apartments, hotels and motels	231 rooms	1 space / 4 staff[1]	5 spaces
			1 space/ 20 rooms	12 spaces
Total				71 spaces

[1] assumes 20 hotel staff

Based on the above, under the Draft DCP 2010, the proposed redevelopment is required to provide storage capacity for 44 staff bicycles and 27 guest/ visitor bicycles. This accounts for the redevelopment only and makes no assumption as to the existing facilities provided as part of the existing hotel.

3.2.1 Loading Facilities

The loading and bus/ coach facilities are accessed via Slip Street on the lower ground level and adjacent to the Western Distributor. Given the capacity of the loading dock to accommodate up to three service vehicles, thought to be up to 12.5m large rigid vehicles, there is no information within the Transport and Accessibility Impact Assessment report that details existing peak period demand nor comment on its capacity to accommodate the servicing requirements of the proposed redevelopment.

The bus/ coach facility can accommodate up to four vehicles at any one time and surveys completed as part of the Transport and Accessibility Impact Assessment report indicates that this area was full during the AM (7:30am-8:30am) peak hour. Given the proposed redevelopment represents a 33% increase in hotel rooms, it is anticipated that the number of buses/ coaches may increase to 5-6 during the AM peak hour. In addition, it is stated that taxi's will also use the facility to set-down/ pick-up function delegates.

As such, it is recommended that a site management plan be incorporated into the operation of the hotel to manage and control the arrival of buses/ coaches to the site to ensure that no overspill occurs. Any overspill has the capacity to impact the servicing requirements of adjacent buildings including the Darling Park site located immediately to the south.

3.3 Traffic Generation Implications

3.3.1 Traffic Generation

As discussed in Section 3.1.3, traffic surveys of the existing hotel porte cochere were undertaken as part of the Transport and Accessibility Impact Assessment report as summarised in Table 3.3.

Table 3.2: Summary of Existing Weekday On-site Traffic

Location	Traffic Generation (two-way vehicles)	
	AM Peak Period	PM Peak Period
Four Points by Sheraton	100 vehicles	60 vehicles
Slip Street Bus/coach set-down/pick-up	4 buses	2 buses

In addition, the report assessed the future weekday traffic generation as summarised in Table 3.3.

Table 3.3: Summary of Proposed Weekday Traffic Generation

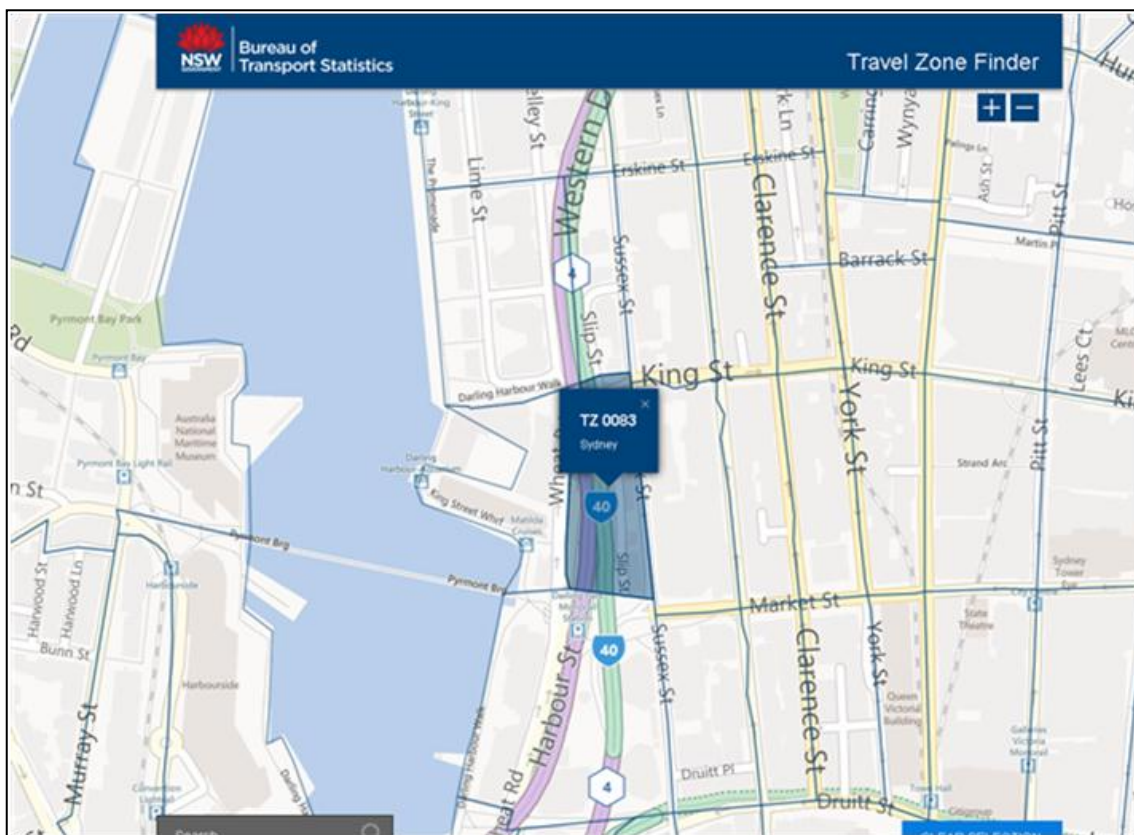
Development Component	Traffic Generation (two-way vehicles)	
	AM Peak Period	PM Peak Period
Hotel expansion	40 vehicles	30 vehicles
Commercial offices	20 vehicles	20 vehicles
Convention/ banquet facilities	170 vehicles	60 vehicles
Total	230 vehicles	110 vehicles

As there is no existing or proposed on-site parking, a significant reduction in development traffic associated with the proposed redevelopment was assumed and considered in-line with the various objectives of the relevant planning policies.

3.3.2 Journey to Work Data

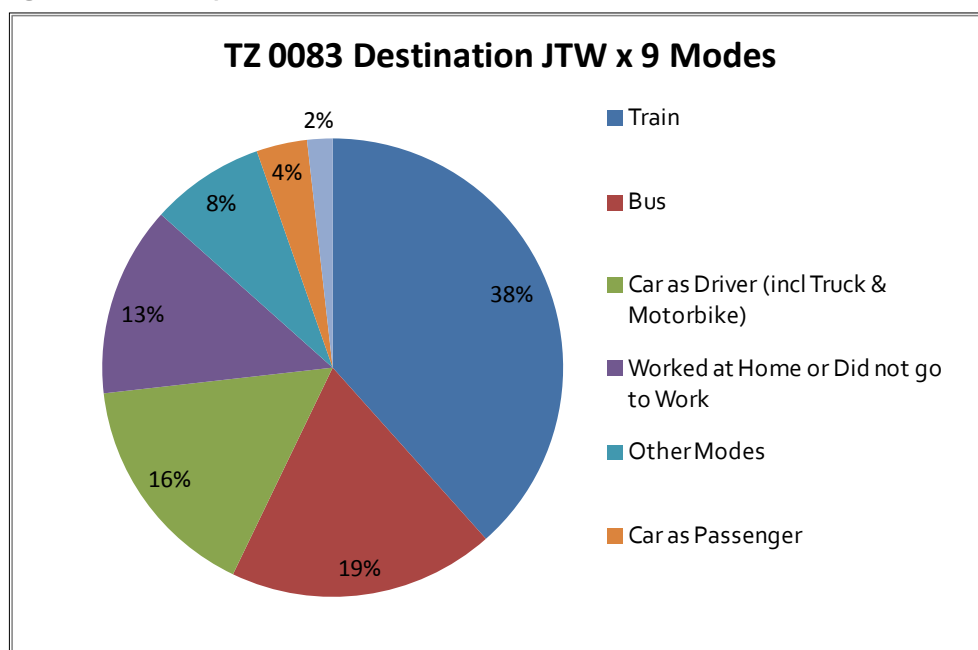
Given the CBD location, an alternative way to determine the travel mode choice is assessing the existing Journey to Work data. As such, the existing mode share distribution of traffic within the surrounding road network is found referencing the 2006 Census Journey to Work (JTW) data (Bureau of Transport Statistics, 2001). JTW data provides information relating to the origin and destination of journeys to work and includes mode of travel. The smallest geographical area for which Journey to Work data is available is a Travel Zone. The development areas are located in Travel Zone (TZ) 0083 which is bounded by Sussex Street, Wheat Road, King Street and Market Street as illustrated in Figure 3.2.

Figure 3.1: JTW Data Travel Zone



GTA Consultants undertook analysis of all trips made to Travel Zone 0083, the results of which are summarised in Figure 3.2. It was found that 57% of all journey to work trips were made using public transport (train, bus) with 20% by car (driver, passenger). No trips were generated from the zone and it is assumed that no residents (or very few) live within the zone.

Figure 3.2: Journey to Work Data



Application of this data to the commercial component of the proposed redevelopment can be made and is based on the following assumptions:

- 5,775m² commercial GFA with an average staff density of 1/ 10m² and 1/ 15m² results in 380 to 580 staff
- 20% arriving to work by car (car driver and car passenger) with an average vehicle occupancy of 1.2 persons/ car
- Arrival / departure split of 80:20 during the AM peak, mirrored during the PM peak.

Application of the above results in the proposed commercial space generating up to 60 vehicles per hour during each respective peak hour. This equates to 50 vehicles in and 10 vehicles out during the AM peak and 10 vehicles in and 50 vehicles out during the PM peak.

Therefore as detailed above, GTA Consultants considers that the proposed redevelopment could potentially generate up to 283 additional vehicles during the AM peak hour and 161 vehicles during the PM peak hour, as detailed in Table 3.4.

Table 3.4: GTA Summary of Proposed Weekday Traffic Generation

Development Component	Traffic Generation (two-way vehicles)	
	AM Peak Period	PM Peak Period
Hotel expansion (porte cochere)	35 vehicles	27 vehicles
Hotel expansion (Secure Car Park)	18 vehicles	14 vehicles
Commercial offices	60 vehicles	60 vehicles
Convention/ banquet facilities	170 vehicles	60 vehicles
Total	283 vehicles	161 vehicles

3.3.3 Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposed redevelopment will be influenced by a number of factors, including the:

- i configuration of the arterial road network in the immediate vicinity of the site
- ii existing operation of intersections providing access between the local and arterial road network
- iii likely distribution of staff residences in relation to the site
- iv configuration of access points to the site.

Having consideration to the above, for the purposes of estimating vehicle movements, the directional distributions detailed in the Transport and Accessibility Impact Assessment report are considered appropriate and have been used to assign the increased traffic as detailed in the intersection assessment below.

3.4 Intersection Operation

The operation of the key intersections within the study area have been assessed using SIDRA INTERSECTION¹, a computer based modelling package which calculates intersection performance.

The commonly used measure of intersection performance, as defined by the RTA, is vehicle delay. SIDRA INTERSECTION determines the average delay that vehicles encounter and provides a measure of the level of service.

Table 3.5 shows the criteria that SIDRA INTERSECTION adopts in assessing the level of service.

Table 3.5: SIDRA INTERSECTION Level of Service Criteria

Level of Service (LOS)	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Near capacity	Near capacity, accident study required
E	57 to 70	At capacity, at signals incidents will cause excessive delays	At capacity, requires other control mode
F	Greater than 70	Extra capacity required	Extreme delay, major treatment required

The SIDRA INTERSECTION analysis adopts the existing traffic volumes detailed in the Transport and Accessibility Impact Assessment report, in conjunction with initial on-site observations and Traffic Control Plans (TCS) obtained from RMS. As such, the results are detailed below, noting that these investigations are preliminary given the short project timeframe:

- signalised intersection of Sussex Street/ King Street
 - average LOS C during the AM and LOS D during the PM
 - 95th percentile back of queue of 250m (34 vehicles) during the AM and in excess of 700m (100 vehicles) during the PM for Sussex Street southbound.

¹ Program used under license from Akcelik & Associates Pty Ltd.

- signalised intersection of Sussex Street/ Market Street
 - average LOS B during the AM and LOS C during the PM
 - 95th percentile back of queue of 120m (17 vehicles) during the AM for King Street westbound
 - 230m (32 vehicles) during the PM for Sussex Street southbound (right turn).

These results are not reflective of the Transport and Accessibility Impact Assessment report outputs and it is recommended that additional investigations be completed in relation to the traffic implications of the proposed redevelopment. At best, the SIDRA results indicate that the surrounding road network is constrained and any additional traffic will have a negative impact on this, particularly in relation to queuing on approach to the study intersections.

4. Conclusion

Based on the analysis and discussions presented within this report, the following conclusions are made:

- i The proposed mixed use redevelopment includes a 25 storey building comprising 231 hotel rooms, 5,775m² of commercial floor space and 4,810m² of convention, exhibition and function space.
- ii This breakdown reflects those detailed in JBA's EIS as the Transport and Accessibility Impact Assessment report adopts a lesser floor area for the convention/ function space.
- iii There is no on-site parking to service the existing hotel, with no future parking proposed. The hotel has an existing arrangement with the adjacent Secure car park to issue parking permits to staff/ guests. This arrangement is considered appropriate and in accordance with the relevant planning controls.
- iv The porte cochere generates up to 100 vehicles (two-way) during the AM peak hour and it is expected that this would increase as a result of the redevelopment.
- v No analysis has been completed as to the impact of queuing (if any) from the porte cochere and taxi zone on Sussex Street.
- vi No details have been provided as to the details of bicycle end of trip facilities. Based on the City of Sydney rates, up to 71 bicycle parking spaces are required to be provided as part of the redevelopment for use by staff/ visitors.
- vii The capacity of the loading dock and bus/ coach area to accommodate future demand remains unclear, however up to 5-6 buses/ coaches may need to be accommodated (where the capacity is 4) based on the volumes detailed in the Transport and Accessibility Impact Assessment report.
- viii No details have been provided as to the management of the proposed hoist to be located within the bus/ coach area. Its operation will impact on the overall operation/ capacity of the area.
- ix GTA Consultants conclude that the proposed redevelopment may generate approximately 50 more vehicles during the AM peak hour than those specified in the Transport and Accessibility Impact Assessment report. The additional traffic is largely a result of the commercial space with the traffic generation based on JTW data (20% arrival by car to the zone).
- x Initial SIDRA analysis indicates that the intersection of Sussex Street/ King Street experiences significant delays with queuing for the northern approach. This analysis does not correspond with the outputs presented as part of the Transport and Accessibility Impact Assessment report. As such, further investigation is recommended to clarify both the existing and future traffic conditions of the surrounding road network.
- xi The Transport and Accessibility Impact Assessment report is, in GTA Consultants opinion lacking in some of the detail to adequately assess the traffic and transport implications of the proposed redevelopment. Key aspects include the following:
 - porte cochere capacity and queuing (if any)
 - taxi zone capacity and overall operations
 - loading dock and bus/ coach operations and future capacity
 - bicycle parking facilities

Conclusion

- traffic generation rates, particularly those associated with the commercial space
- SIDRA analysis completed by GTA Consultants does not correspond with that presented in the Transport and Accessibility Impact Assessment report
- SIDRA analysis of the key study intersections, particularly the ability for Sussex Street/King Street intersection to accommodate increased traffic volumes.

Melbourne

A 87 High Street South
PO Box 684
KEW VIC 3101
P +613 9851 9600
F +613 9851 9610
E melbourne@gta.com.au

Sydney

A Level 2, 815 Pacific Highway
CHATSWOOD NSW 2067
PO Box 5254
WEST CHATSWOOD NSW 1515
P +612 8448 1800
F +612 8448 1810
E sydney@gta.com.au

Brisbane

A Level 3, 527 Gregory Terrace
BOWEN HILLS QLD 4006
PO Box 555
FORTITUDE VALLEY QLD 4006
P +617 3113 5000
F +617 3113 5010
E brisbane@gta.com.au

Canberra

A Unit 4, Level 1, Sparta Building, 55 Woolley Street
PO Box 62
DICKSON ACT 2602
P +612 6263 9400
F +612 6263 9410
E canberra@gta.com.au

Adelaide

A Suite 4, Level 1, 136 The Parade
PO Box 3421
NORWOOD SA 5067
P +618 8334 3600
F +618 8334 3610
E adelaide@gta.com.au

Gold Coast

A Level 9, Corporate Centre 2
Box 37
1 Corporate Court
BUNDALL QLD 4217
P +617 5510 4800
F +617 5510 4814
E goldcoast@gta.com.au

Townsville

A Level 1, 25 Sturt Street
PO Box 1064
TOWNSVILLE QLD 4810
P +617 4722 2765
F +617 4722 2761
E townsville@gta.com.au