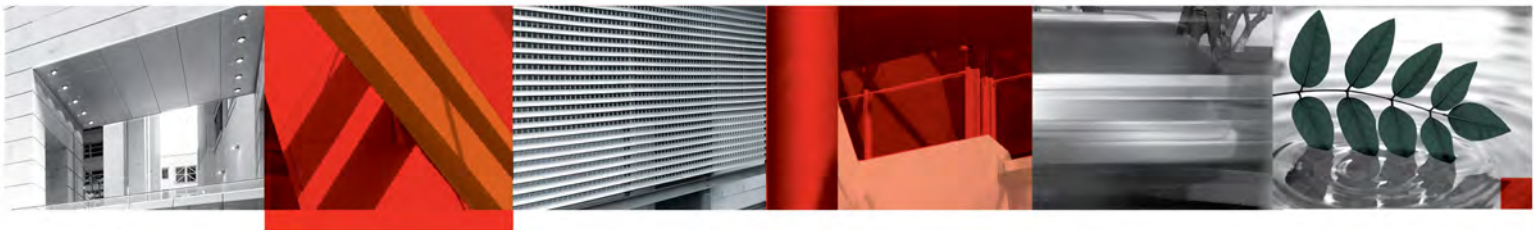




State Significant Development Application - SSDA4 Environmental Impact Statement



Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP)

The Haymarket - Mixed Use Commercial Office Building and Public Car Park

Submitted to NSW Department of Planning and Infrastructure
On Behalf of Lend Lease (Haymarket) Pty Ltd

Volume 1
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This report has been prepared by: Michael Oliver

Signature



Date 31/05/13

This report has been reviewed by: Alexis Cella/ Lesley Bull

Signature



Date 31/05/13

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Under Separate Cover

Physical model
Electronic model
Materials Sample board
Landowner's consent

Statement of Validity

Environmental Impact Statement prepared by

Name	Lesley Bull / Alexis Cella
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In respect of	State Significant Development Application for Sydney International Convention, Exhibition and Entertainment Precinct, The Haymarket North-West Plot

State Significant Development Application

Applicant name	Lend Lease (Haymarket) Pty Ltd
Applicant address	30 Hickson Road Millers Point NSW 2000
Land to be developed	Sydney International Convention, Exhibition and Entertainment Precinct, Haymarket
Proposed development	Development of The Haymarket North-West Plot for a public carpark and commercial office building with associated infrastructure and public domain works.

Environmental Impact Statement

	An Environmental Impact Statement (EIS) is attached.
Certificate	<p>I certify that I have prepared the content of this EIS and to the best of my knowledge:</p> <ul style="list-style-type: none">■ It is in accordance with Part 4 of the <i>Environmental Planning and Assessment Act 1979</i> and Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>.■ It contains all available information that is relevant to the environmental assessment of the development to which the statement relates.■ The information contained within this statement is neither false nor misleading.

Signature



Name

Lesley Bull



Alexis Cella

Date

31 May 2013

Executive Summary

Purpose of this report

This Environmental Impact Statement (EIS) supports a State Significant Development Application for the construction and use of a mixed use commercial office building and public car park within the North-West Plot of The Haymarket – a new mixed used neighbourhood within the overall Sydney International Convention, Exhibition and Entertainment Precinct. This EIS is submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), and *State Environmental Planning Policy State and Regional Development 2011* (SEPP SRD). The proponent is Lend Lease Haymarket Pty Ltd who formed part of Destination Sydney (a consortium comprising Lend Lease, Capella Capital, AEG Ogden and Spotless), selected as the preferred proponent to transform Darling Harbour. The working title for the consortium is now Darling Harbour Live.

Background

Key features of the SICEEP Project and The Haymarket Concept Proposal (Concept Proposal) are outlined in **Section 1** of this EIS, including the current status of applications across the site of the SICEEP Project (SICEEP Site) and development for which consent is currently being sought.

Proposed Development

SSDA4 seeks consent for the construction and use of a mixed use commercial office building and public car park within the North West Plot of The Haymarket. The Haymarket Site is to be developed for a mix of residential and non-residential uses, including but not limited to residential buildings, commercial, retail, community and open space. The North West Plot is one of six development plots identified in the Concept Proposal DA.

Under the Concept Proposal, the North West Plot will accommodate active ground floor uses, a multi-storey above ground public car park and a commercial office building above. More specifically, this Stage 2 SSD DA seeks approval for the following components of the development:

- Site preparation works including demolition, minor excavation and remediation;
- Associated tree removal and replanting;
- Construction and use of a mixed use commercial building comprising:
 - ground level active (retail/commercial/television studio) uses and loading dock;
 - public car park (above ground);
 - ancillary commercial office parking (above ground); and
 - commercial office space;
 - building identification signage zones and 1x wall advertisement.
- Provision of vehicle access to the development from Exhibition Place;
- Public domain improvements, including provision (part) of a new east-west pedestrian laneway (known as Dickson's Lane) linking Darling Drive to the Boulevard; and
- Extension and augmentation of physical infrastructure / utilities as required.

Strategic and Statutory Planning Considerations

The proposed development has a total Capital Investment Value (CIV) of over \$10 million and is located within the Darling Harbour and is therefore classified as SSD pursuant to Schedule 1 of the SEPP SRD.

A request to issue Director-General's Requirements (DGRs) for environmental assessment of the SICEEP Project (including the subject development proposal) was made on the 14 December 2012 and was provided to Lend Lease (Haymarket) Pty Ltd on 21 January 2013. Updated DGRs were issued to the proponent on 12 March 2013, and these were subsequently amended and re-issued to the proponent on 27 March 2013 (see **Appendix A**).

Section 5.0 of the EIS considers all applicable legislation in detail. The proposal complies with all relevant planning controls.

Darling Harbour Development Plan No 1 (DHDP) is the principal environmental planning instrument applying to the Site. Under Schedule 6 Part 7 clause 23(1) of the EP&A Act, the DHDP is taken to be a regional environmental plan. By operation of Schedule 6, Part 21 and Clause 15 of the Environmental Planning and Assessment Regulation 2000, Regional Environmental Plans are deemed to be State Environmental Planning Policies (SEPPs). Its principal aim is to define the type of development which may be permitted within the Darling Harbour Development Area. Uses permissible on the Site are broad and include development for the purposes of tourist, educational, recreation, entertainment, cultural or commercial facilities, car parking stations, film television and radio stations, hotels, parks and gardens, residential buildings, serviced apartments, shops, refreshment rooms and utility installations. There are no maximum building heights or GFA restrictions imposed by DHDP, and no other detailed controls or provisions that guide or restrict the form of development on the site.

Environmental Impact

This EIS provides an assessment of the environmental impacts of the project in accordance with the DGRs and sets out the undertakings made by Lend Lease Haymarket Pty Ltd to manage and minimise potential impacts arising from the development (refer to Section 6.0). Key environmental assessment considerations identified include, amongst others:

- built form and urban design
- overshadowing to adjacent development;
- traffic generation, car parking requirements, and road and pedestrian safety;
- impacts to items of heritage significance;
- impacts to archaeology;
- construction noise and vibration;
- the generation of waste;
- flooding; and
- remediation of existing contamination.

All identified impacts are addressed in this EIS and are capable of being ameliorated through the implementation of appropriate mitigation measures outlined in Section 6.0.

Conclusion

The mitigation measures in Section 6.0 have been prepared to inform the ongoing management of the North-West Plot throughout the construction phase and operational phase of the proposed building and public domain. This Environmental Impact Statement fulfils the requirements of the *Environmental Planning and Assessment Act 1979* and addresses the Director General's Requirements, and demonstrates that the impacts of the proposal can be satisfactorily managed. In light of the above, and the significant benefits of the proposed development, we therefore recommend that the proposed development be approved.

1.0 Introduction

This Environmental Impact Statement (EIS) is submitted to the NSW Department of Planning and Infrastructure (the Department) in support of a State Significant Development Application (SSDA) for the construction and use of a mixed use commercial development and public car park building and associated public domain works within a new mixed use residential neighbourhood (referred to as 'The Haymarket'), at Darling Harbour.

This SSDA (referred to as SSDA 4) follows the submission of a staged SSDA (SSDA 2) submitted in March 2013 to the Department that set out a Concept Proposal for 'The Haymarket'. The Haymarket forms part of the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) Project, which will deliver Australia's global city with new world class convention, exhibition and entertainment facilities and support the NSW Government's goal to "make NSW number one again".

SICEEP is being delivered via a 'whole of precinct' approach, guided by a Precinct Plan for the entire 20 hectare site. This Precinct Plan will be delivered through a number of discrete packages and development applications which will be lodged accordingly.

The SICEEP Project Site is located within the Darling Harbour precinct which is identified as a State Significant Site in Schedule 2 of *State Environmental Planning Policy (State and Regional Development) 2011*. As the proposed development will have a capital investment value of more than \$10 million it is declared to be State Significant Development (SSD) for the purposes of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

As this 'Stage 2' SSDA follows on from the submission of a 'Staged 1' SSDA for The Haymarket (SSDA2), the provisions of Section 83 of the EP&A Act will accordingly apply.

The EIS has been prepared by JBA on behalf of Lend Lease (Haymarket) Pty Ltd, and is based on the Architectural Drawings provided by Lend Lease Design and other supporting technical information appended to the report (see Table of Contents).

This report describes the site, its environs and the proposed development, and provides an assessment of the proposal in terms of the matters for consideration under Section 79C(1) of the EP&A Act.

This EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), and the Requirements of the Director General of the Department for the preparation of the EIS, which are included at **Appendix A**. This EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report.

1.1 Overview of Proposed Development

The proposal relates to a detailed SSDA for a mixed use commercial office and public car park building and associated public domain works within The Haymarket at Darling Harbour. The Haymarket Site is to be developed for a mix of residential and non-residential uses, including but not limited to residential buildings, commercial, retail, community and open space. The proposal generally relates to land comprising the North West Plot. The North West Plot is one of six development plots identified in the Stage 1 Concept Proposal (SSDA2) submitted to the Department on 15 March 2013 (currently under assessment).

The North West Plot will accommodate active ground floor uses, a multi-storey above ground public car park and a commercial office building above. More specifically, this SSDA seeks approval for the following components of the development:

- Site preparation works including demolition, minor excavation and remediation;
- Associated tree removal and replanting;
- Construction and use of a mixed use commercial building comprising:
 - ground level active (retail/commercial/television studio) uses and loading dock;
 - public car park (above ground);
 - ancillary commercial office parking (above ground); and
 - commercial office space;
 - building identification signage zones and 1x wall advertisement.
- Provision of vehicle access to the development from Exhibition Place;
- Public domain improvements, including provision (part) of a new east-west pedestrian laneway (known as Dickson's Lane) linking Darling Drive to the Boulevard; and
- Extension and augmentation of physical infrastructure / utilities as required.

1.2 Background to the Development

The NSW Government considers that a precinct-wide renewal and expansion of the existing convention, exhibition and entertainment centre facilities at Darling Harbour is required, and is committed to Sydney reclaiming its position on centre stage for hosting world-class events with the creation of the Sydney international convention, exhibition and entertainment precinct.

Following an extensive and rigorous Expressions of Interest and Request for Proposals process, Darling Harbour Live (formerly known as 'Destination Sydney' - a consortium comprising AEG Ogden, Lend Lease, Capella Capital and Spotless) was announced by the NSW Government in December 2012 as the preferred proponent to transform Darling Harbour and create the new Sydney international convention, exhibition and entertainment Precinct (SICEEP).

Key features of the Darling Harbour Live Preferred Master Plan include:

- Delivering world-class convention, exhibition and entertainment facilities, including:
 - Up to 40,000m² exhibition space;
 - Over 8,000m² of meeting rooms space, across 40 rooms;
 - Overall convention space capacity for more than 12,000 people;
 - A ballroom capable of accommodating 2,000 people; and

- A premium, red-carpet entertainment facility with a capacity of 8,000 persons.
- Providing up to 900 hotel rooms in a hotel complex at the northern end of the precinct.
- A vibrant and authentic new neighbourhood at the southern end of the precinct, called 'The Haymarket', home to an IQ Hub focused on the creative industries and high-tech businesses, apartments, student accommodation, shops, cafes and restaurants.
- Renewed and upgraded public domain, including an outdoor event space for up to 25,000 people at an expanded Tumbalong Park.
- Improved pedestrian connections linking to the proposed Ultimo Pedestrian Network drawing people between Central, Chinatown and Cockle Bay Wharf as well as east-west between Ultimo/Pymont and the City.

On 15 March 2013 the first SSDAs for the SICEEP Project were lodged with the Department. The key components of these proposals are outlined below and **Figure 1** illustrates the Precinct Plan for the SICEEP site.

1.2.1 Public Private Partnership Component (SSD 12_5752)

The Public-Private Partnership (PPP) component of the Darling Harbour Live development includes the core facilities of SICEEP Project, including the International Convention Centre (ICC), ICC Exhibition, Event Deck and The Theatre. The application (referred to as SSDA1) also seeks consent for ancillary commercial premises and public domain upgrades.

Key components of the development include:

- Demolition of existing improvements on the site, including the existing Convention Centre and Exhibition Centre;
- Construction of a new, integrated and world-class Convention, Exhibition and Entertainment Centre (core facilities); and
- Public domain improvements.



Figure 1 – SICEEP Precinct Plan

1.2.2 The Haymarket Concept Proposal (SSD 13_5878)

The Haymarket Stage 1 Concept Proposal establishes the vision and planning and development framework which will be the basis for the consent authority to assess this and future development proposals within the Haymarket Site. It articulates what Lend Lease is seeking to achieve for future development and sets the broad parameters for the development of the site. As noted, The Haymarket precinct has been divided into six development plots which will generally be delivered through separate SSD DAs (see **Figure 2**).



Figure 2 –Development Plots within The Haymarket

Key components of the Stage 1 Concept Proposal (referred to as SSDA2) include:

- Staged demolition of existing site improvements, including the existing Sydney Entertainment Centre (SEC), Entertainment Centre Car Park, and part of the pedestrian footbridge connected to the Entertainment car park and associated tree removal;
- A network of streets, lanes, open space areas and through-site links generally as shown on the Public Domain Concept Proposal, to facilitate reintegration of the site into the wider urban context and connection with the broader SICEEP Site;
- Street layouts;
- Development plot sizes, development plot separation, building envelopes (maximum height in RLs), building separation, building depths, building alignments and a benchmark for natural ventilation and solar provision for the precinct;
- Land uses across the site, including residential and non-residential uses;
- A maximum total gross floor area (GFA) across The Haymarket Site of 197,236m² for the mixed use development (excluding ancillary above ground car parking), comprising of:
 - A maximum of 49,545m² non-residential GFA; and
 - A maximum of 147,691m² residential GFA;
- Above ground parking including public car parking;

- Residential car parking rates to be utilised in the subsequent detailed (Stage 2) Development Applications, being:
 - Zero (0) spaces per studio apartment;
 - Maximum one (1) space per two (2) one bedroom apartments;
 - Maximum one (1) space per one bedroom + study apartment, plus one (1) additional space per five (5) apartments;
 - Maximum one (1) space per two bedroom apartment, plus one (1) additional space per five (5) apartments; and
 - Maximum two (2) spaces per 3 + bedroom apartment;
- Design Guidelines to guide future development and the public domain; and
- A remediation strategy.

This EIS has been prepared to support a detailed 'Stage 2' SSDA for a mixed use commercial office and public car park building and associated public domain works within The Haymarket, consistent with the Concept Proposal SSDA.

1.3 Objectives of the Development

1.3.1 SICEEP Project Objectives

The following strategic objectives have been endorsed by the State to guide the development and implementation of the SICEEP Project:

- Deliver world-class core functions of convention, exhibition and entertainment facilities that exceed the expectations of domestic and international visitors;
- Reaffirm Darling Harbour as Australia's premier gathering place by creating an exciting, connected, active and vibrant precinct that brings delight to visitors and Sydneysiders alike;
- Provide Sydney with unified high quality convention, exhibition and entertainment facilities that befit Australia's global city;
- Maximise the direct and indirect economic benefits to NSW from the Project;
- Provide a value for money solution for the State, with completion on time and on budget;
- Demonstrate excellence in design and environmental sustainability; and
- Enhance connectivity around and through the Precinct, and optimise the quality of the public domain.

1.3.2 The Haymarket Objectives

The objectives for 'The Haymarket' Concept Proposal include:

- To develop The Haymarket into one of Sydney's most innovative residential and working districts;
- Provide a new inner urban mixed-use quarter within walking distances of the universities and the CBD and with strong linkages to public transport nodes;
- Provide for attainable city apartment living, suitable for young professionals and students;
- Increase and improve connections with Chinatown, Ultimo, the CBD and the south of the City;
- Provide opportunities for public activity and enterprise within The Haymarket to provide a catalyst for future growth and expansion in the area;

- Provide a quality visitor experience and establish the Haymarket as a distinctive destination within a revitalised quarter of the City;
- Explore opportunities to partner with UTS to deliver a new creative industries and technology hub supported by a range of facilities and community functions that promote a positive economic impact for the City;
- Repair the urban fabric of this part of the city restoring street grain and connectivity; and
- Increase and improve pedestrian and cycle connectivity across the site and into the SICEEP from the southern and western quarters of the city.

1.3.3 SSDA4 Objectives

Key development objectives which underpin this application include:

- Establishing a building that provides a strong visual address to the public realm and draws a visual affinity with the SICEEP Core Facilities (i.e. The Theatre);
- Provide sufficient public car parking within the North West Plot to support the operational requirements of the SICEEP Core Facilities and neighbouring facilities such as the Powerhouse Museum;
- Providing employment-generating floorspace in close proximity to public transport that will support a diversity of uses across The Haymarket Precinct;
- Include a range of ground level uses that contribute to activity within and the character of The Haymarket's public spaces; and
- Provide a high quality built form which sits harmoniously within the new urban environment of The Haymarket precinct.

1.4 Analysis of Alternatives

1.4.1 Strategic need for the proposal

The NSW Government recognises that the existing convention, exhibition and entertainment facilities at Darling Harbour are facing increasing competition from similar facilities within the Asia-Pacific region and as such new facilities are required that will provide appropriate facilities that:

- are suitable for contemporary conventions and are competitive with other facilities nationally and globally;
- are constructed to international best practice;
- are more flexible in their ability to respond to the changing needs of the convention, exhibition and event industry; and
- are designed for longevity.

The Haymarket is a key component of the overall redevelopment of Darling Harbour. The Concept Proposal will rejuvenate an underutilised area of the City, and will provide a framework for future development that both respects the existing urban fabric of the Haymarket Precinct and responds to the future developments proposed for the PPP Site.

1.4.2 Alternative Options

Alternative to the SICEEP Development Proposal

Three options are available to the NSW Government in responding to the identified need for improved convention, exhibition and entertainment facilities.

Do Nothing

The 'do nothing' option, would result in the entertainment centre facilities and broader facilities at Darling Harbour remaining unchanged and requiring ongoing maintenance. Sydney's appeal as a suitable venue for international conferences, exhibitions and events would continue to diminish, to the detriment of the locality and the wider NSW and Australian economy.

If this option was selected, the significant benefits in creating a new mixed use neighbourhood on an underutilised site on the periphery of the CBD would not materialise.

Refurbish the existing facilities

Refurbishment of the existing facilities (including entertainment centre) is not physically capable of achieving the required venue parameters identified as necessary to make these venues competitive.

Provide new facilities in an alternative location

The large-scale spatial requirements of a modern and integrated convention, exhibition and entertainment facility and the built-up nature of the CBD precludes an alternative central-Sydney location to Darling Harbour, and as such an outer-Sydney venue would need to be identified.

There are very few consolidated sites in State Government ownership of sufficient size to accommodate the required facilities within the central-Sydney area. Comparable international facilities are located in either CBD locations or near airport hubs in order to allow visitors to easily commute between the airport and other business engagements. An outer-suburbs location is therefore considered unsustainable and inferior to a central-Sydney location such as Darling Harbour.

The marketing of conventions is based on facilities and location. Darling Harbour, due to its location adjacent to the CBD and on Sydney Harbour, provides one of only a very few international convention and exhibition facilities located within a parkland setting. This unique location has resulted in Sydney's facilities performing well to date internationally.

International business travellers spend an average of \$6,000 per trip within Sydney, and outer-suburbs provide more limited opportunities to capture this economic input due to the more limited availability of hotels, tourism-related industries and activities, retail and dining options. Shifting Sydney's premier business tourism facilities away from the CBD would therefore fail to harness the complete economic benefits available to the NSW economy, which is inconsistent with the primary objectives of the project and the NSW State Plan. This option is therefore not considered to be viable.

In light of the above, the SICEEP redevelopment project (including the relocation of the entertainment centre and its integration with new convention and exhibition facilities) within Darling Harbour is the only viable option that will meet the objectives of the NSW Government, and meet the expectations of residents and visitors to Sydney.

Alternative to The Haymarket Concept Proposal

There are alternatives to the redevelopment of the Haymarket Site as a new mixed use residential neighbourhood. These potentially could include expanding the commercial core of the CBD and creating a new commercial precinct or alternatively expanding public open space and creating a new urban park.

Both of these redevelopment alternatives have merit, however would not deliver the same extent of benefits to the City or Sydney more broadly as that able to achieved through the proposal the subject of this SSDA. For example, these alternatives would not:

- Increase housing supply and choice;
- Assist in meeting residential dwelling targets for the region;
- Allow people to live closer to where they work/learn;
- Encourage more sustainable travel behaviour;
- Make the efficient use of a significant urban renewal site (open space alternative);
- Support a more compact and connected City (open space alternative); and
- Support the education and health precinct through providing opportunities for staff and students to live nearby.

Further, the concept proposal for The Haymarket includes the provision of a significant portion of the site public open space together with incorporating commercial and retail development that will support commerce and jobs. It also provides much needed legible links and connections between the City and the suburbs of Haymarket, Pyrmont and Ultimo.

Alternative to Mixed Use Commercial Building and Public Car Park for SSDA4/ North West Plot

A number of alternative options for the development of the North West Plot were considered. Alternatives to the current proposal for the North West Plot would be the development of this site for another viable land use, such as including residential or alternative commercial uses. New development within the site must contribute to the range of uses and activity within both The Haymarket precinct and Darling Harbour more generally, and provide a strong relationship with the precinct's ground plane. In light of the extensive range of uses to be provided across The Haymarket precinct, which includes commercial, residential and student accommodation uses, it is considered that the proposed development is an appropriate use for the Site which supports the operations of the SICEEP Core Facilities through the provision of public car parking and a compatible commercial use contributing towards the vitality of the Precinct. The justification for the proposed development is detailed more fully at **Sections 3, 5 and 7**.

1.5 Planning Approvals Strategy

In response to separate contractual agreements with the NSW Government and staging requirements, Lend Lease (Haymarket) Pty Ltd is proposing to submit a number of separate development applications for key elements of the Haymarket.

This Stage 2 SSDA involves the detailed development of the North West Plot for a mixed use commercial and public car park building and associated public domain works. Further detailed DAs will also be lodged seeking approval for specific aspects of The Haymarket in accordance with the concept proposal (currently under assessment).

As outlined in Section 1.2 a separate SSDA has been lodged for the PPP Component of the SICEEP Project comprising the core facilities of SICEEP Project.

The different components of the initial development applications for the SICEEP Project is reproduced in **Figure 3**, with further details in terms of timing and status provided within **Table 1**. Further applications for development will be submitted for the development of the remainder of the precinct.

Table 1 – Status and program for initial SICEEP SSD DAs

DA No	Description of Application	Status
SSDA 1	SICEEP Core Facilities – Exhibition Centre, Convention Centre, The Theatre, Event Deck and Tumbalong Park	Lodged: 15 March 2013 Exhibited: 27 March to 10 April 2013 Under assessment
SSDA 2	The Haymarket Concept Proposal (Stage 1 SSD DA)	Lodged: 15 March 2013 Exhibited: 27 March to 10 April 2013 Under assessment
SSDA 3	Western Plot (Student Accommodation)	Lodgement: May 2013
SSDA 4 - Subject of this DA	North-West Plot (Public car park/ commercial office building)	Lodgement: May 2013
SSDA 5	South-West Plot (Mixed Use Development)	Lodgement: May 2013
SSDA 6	ICC Hotel	Targeted lodgement: Third quarter 2013



Figure 3 – Staging of initial planning applications for the SICEEP Site

1.6 Director General's Requirements

In accordance with section 89G of the EP&A Act, the Director-General of the Department of Planning and Infrastructure issued the requirements for the preparation of the EIS on 26th March 2013. A copy of the Director General's Requirements (DGRs) is included at **Appendix A**.

The DGRs require that the EIS must include the documents listed in Schedule 1 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation) and must meet the requirements of Schedule 2 of the Regulation, specifically the form specifications in Clause 6 and the content specifications in Clause 7. Several stakeholders were identified with whom consultation must occur during the preparation of the EIS.

Table 2 provides a summary of the individual matters listed in the DGRs and identifies where these requirements are addressed in this report and the accompanying technical studies.

Table 2 – Location of Director General Requirements in the EIS

Director General Requirement	Location in Report	
	Report	Appendix
General Requirements as relevant to the scope of works for each individual SSDA		
The EIS must meet the minimum requirements in Schedule 2 the <i>Environmental Planning and Assessment Regulation 2000</i> , specifically:	Pages i, ii, iii	-
<ul style="list-style-type: none"> form specifications in clause 6; and form specifications in clause 7. 		
Relevant EPI's, policies and guidelines	Report	Appendix
Address the relevant statutory provisions and planning policies and guidelines applying to the site including:	Section 5.3 and 5.4	-
EP&A Act 1979	Section 5.2	-
State Environmental Planning Policy (State & Regional Development) 2011	Section 5.4	-
State Environmental Planning Policy (Infrastructure) 2007	Section 5.4	-
State Environmental Planning Policy No.55 – Remediation of Land	Section 5.4	Appendix G and H
Draft State Environmental Planning Policy (Competition) 2010	Section 5.4	-
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005	Section 5.4	-
Darling Harbour Development Plan No.1	Section 5.4	-
NSW 2021	Section 5.3	-
Metropolitan Plan for Sydney 2036	Section 5.3	-
NSW Long Term Transport Master Plan	Section 5.3	-
The Sydney City Draft Sub-Regional Strategy	Section 5.3	-
Sustainable Sydney 2030	Section 5.3	-
Infrastructure NSW SICEEP Urban Design and Public Realm Guidelines	Section 5.3	Appendix I
City of Sydney Chinatown Public Domain Plan	Section 5.3	-
Development Near Rail Corridors and Busy Roads - Interim Guideline	Section 5.3	-
Planning Guidelines for Walking and Cycling	Section 5.3	-
NSW Bike Plan 2010	Section 5.3	-
Integrating Land Use and Transport Policy Package	Section 5.3	-

Director General Requirement	Location in Report	
Cycle Strategy and Action Plan 2007-2017	Section 5.3	-
Healthy Urban Development Checklist	Section 5.3	-
Waste Classification Guidelines (DECC 2008)	Section 5.3	Appendix G
Heritage Council Guidelines assessing the Significance of Archaeological Sites and Relics	Section 5.3	Appendix E
Crime Prevention through Environmental Design principles.	Section 5.3	Appendix BB
Built Form and Design Excellence	Report	Appendix
Address the height, bulk and scale of the proposed development within the context of the locality.	Section 5.5 and 5.7	Appendix I
Address the visual impact	Section 5.8	Appendix U
Address design quality	Section 5.5, 5.6 and 5.7	Appendix I and T
Outline the strategy to ensure design excellence is achieved	Section 5.6	Appendix I and T
Address the Urban Design and Public Realm Guidelines	Section 5.5	Appendix I
Public Domain and Urban Design	Report	Appendix
Address all aspects of the public domain such as open spaces within the precinct and footpath, road paving, cycleways, tree planting, footway dining, public art and light	Section 3.5	Appendix K
Identify and analyse key pedestrian desire lines to the surrounding area and critical links to the CBD.	Section 5.9	Appendix V
Address WSUD opportunities	Section 5.10	Appendix L
Address the CPTED for the design of the public domain	Section 5.20	Appendix BB
Demonstrate pedestrian circulation and connections on site and to surrounding streets in schematic form	Section 5.9	Appendix V
Address the Urban Design and Public Realm Guidelines	Section 5.5	Appendix K
Ecologically Sustainable Development	Report	Appendix
Detail how ESD principles will be incorporated in design, construction and ongoing operations including: <ul style="list-style-type: none"> - sustainable technologies or renewable energy - integrated Water Management Plan 	Section 3.7, 3.8, 5.10, 5.19 and 7.3	Appendix L and N
Address the potential for sustainable technologies and/or renewable energy	Section 5.17	Appendix M
Provide an integrated Water Management Plan	Section 3.7 and 5.10	Appendix L
Amenity	Report	Appendix
Demonstrate a high level of environmental amenity including: <ul style="list-style-type: none"> - solar access - acoustic impacts - visual privacy - view loss - wind impacts - reflectivity and - overshadowing 	Section 5.7	Appendix I
Noise & Vibration	Report	Appendix
Identify the main noise and vibration generating sources and activities during construction (including demolition) and operation and outline measures to mitigate potential impacts	Section 5.16	Appendix Y
Transport and Accessibility (Construction and Operation)	Report	Appendix
Address the impact of traffic and pedestrian volumes including <ul style="list-style-type: none"> - upgrading or road improvements - impacts on light rail corridor or western distributor - level of car parking - sustainable transport measures 	Section 5.9	Appendix V
Provide details of any upgrading or road improvement works required	Section 5.9	Appendix V

Director General Requirement	Location in Report	
Address any impacts on the Light Rail Corridor and western distributor	N/A	-
Justify the level of parking provided on site	Section 5.9	Appendix V
Provide details of measures to encourage sustainable means of transport	Section 5.9	Appendix V
Address the impact from construction traffic	Section 5.9	Appendix V
Provide details of the parking arrangements duration demolition/construction	Section 5.9	Appendix V
Provide details of the pedestrian and cyclists connections to the surrounding area	Section 5.9	Appendix V
Address road safety at key intersections	Section 5.9	Appendix V
Drainage, Flooding, Climate Change and Sea level Rise	Report	Appendix
Provide a drainage concept for the site including WSUD	Section 3.7 and 5.10	Appendix L
Address likely groundwater, flooding and sea level rise risks on the site and measures to ameliorate any impacts	Section 5.10	Appendix L
Heritage	Report	Appendix
Address the impacts of the proposal on heritage significance of the site and adjacent area, including identifying opportunities for heritage interpretation within the public domain	Section 5.11	Appendix D
Utilities	Report	Appendix
Address existing capacity and augmentation requirements	Section 5.19	Appendix B
Address how infrastructure will be protected during demolition and construction phases	Section 5.19	Appendix B
Staging	Report	Appendix
Provide details regarding staging of the development	Section 3.11	Appendix I
Contributions	Report	Appendix
Address the provision of public benefit, services and infrastructure and any relevant contributions requirements	Section 5.23	-
Water Quality	Report	Appendix
Address water quality impacts during construction	Section 5.21	Appendix O
Air Quality	Report	Appendix
Address air quality issues in relation to the Cross City Tunnel ventilation	Section 5.22	-
Construction Impacts	Report	Appendix
Address demolition and construction impacts including <ul style="list-style-type: none"> - noise and vibration - air quality and odour impacts - water quality and construction waste management - traffic management - vehicle routes and truck numbers - hours of operation - access arrangements - traffic control measures - crane locations and swing paths - community notification and complaints handling 	Section 5.16 and 5.21	Appendix O and Z
Specific Requirements – SSD 4 – Public car park/commercial office building in The Haymarket precinct		
Built Form and Urban Design	Report	Appendix
Demonstrate that the detailed design of the building addresses the requirements of the adopted design excellence strategy as required by general DGR 3; and	Section 5.6	Appendix I and T
Address the relationship between the public car park and commercial uses.	Section 3.4	Appendix V
Concept Plan	Report	Appendix
Demonstrate consistency with the Concept Plan for the Haymarket precinct in SSD2.	Section 5.5	Appendix I

1.7 Other Approvals

In addition to the approvals noted elsewhere in this document, additional approvals will be required in order to permit the proposed development to occur. These approvals include, but are not limited to:

- *Sydney Harbour Foreshore Authority Regulation* under clause 4 (for commercial activities and uses in Darling Harbour); and
- *Sydney Water Act 1994* under Section 73 (compliance certificate).

These additional approvals will be sought at the appropriate time.

2.0 Site Analysis

2.1 Site Location and Context

The SICEEP Site is located within the Darling Harbour Precinct in the City of Sydney Local Government Area (LGA). Darling Harbour is a 60 hectare waterfront precinct, located on the south-western edge of the Sydney Central Business District, and to the east of the Pyrmont Peninsula. The Precinct is unique in terms of its function, location, land ownership and physical characteristics, and accommodates a wide range of land uses. These predominantly relate to recreation, tourism, entertainment and business.

The SICEEP Site occupies an area of approximately 20 hectares, and is located within the western portion of the Darling Harbour Precinct. It is generally bound by the Light Rail Line to the west, Harbourside Shopping Centre and Cockle Bay to the north, Darling Quarter, the Chinese Garden of Friendship and Harbour Street to the east, and Hay Street to the south. The location of the SICEEP Site is shown in **Figure 4** and **5** below.

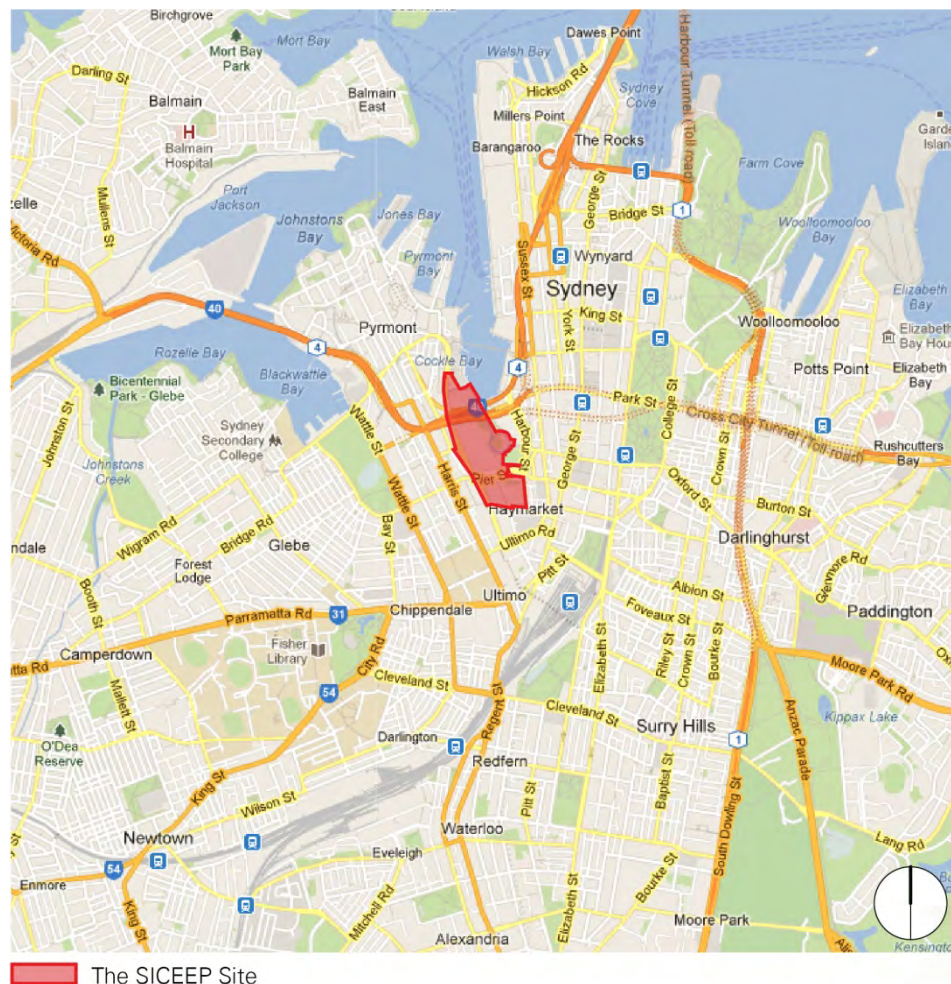


Figure 4 – SICEEP Site Context Plan

2.2 Site Description

The Haymarket

The Haymarket Site is located in the south of the SICEEP Site, within the northern portion of the suburb of Haymarket. The Haymarket Site is bounded by the Powerhouse Museum to the west, the Pier Street overpass and Little Pier Street to the north, Harbour Street to the east, and Hay Street to the south. The Haymarket Site is irregular in shape and occupies an area of over 4 hectares. An aerial photograph illustrating the boundary of The Haymarket precinct and the North-West Plot site is provided at **Figure 5** below.



 The Haymarket Site

Figure 5 – Aerial photograph of The Haymarket Site

SSDA4 Development Site (Subject Site)

The SSDA4 Development site generally comprises the central north portion of The Haymarket Site, fronting Pier Street. The site includes land noted as the North West Plot under the Concept Proposal (SSDA4). An aerial view of the site is illustrated at **Figure 6**, and the location of the Site in the context of adjoining future developments in The Haymarket is illustrated at **Figure 7**.



 SSDA 4 Site Boundary

Figure 6 – Aerial view of the SSDA4 site



Figure 7 – SSDA4 site boundary

The legal description of the land to which this application relates (the SSDA4 Site) is as follows:

- Lot 1 DP 612907
- Lot 2 DP 6129077
- Lot 201 DP 1165804
- Lot 1 DP 827982
- Lot 900 DP 1132344
- Lot 2 DP 827982

2.2.1 Existing Development

The SSDA4 Site is currently occupied by the Sydney Entertainment Centre (SEC) multistorey car park. Photographs of the existing development are provided at **Figures 8 to 10** below.

It is noted that existing structures and site improvements are proposed to be demolished as part of both SSDA4 and SSDA5 as described in **Section 3.0**.



Figure 8 – Entertainment Centre Car Park eastern facade, viewed from the north



Figure 9 – Entertainment Centre car park western facade, viewed from the north



Figure 10 – Sydney Entertainment Centre Car Park and billboard signage viewed from Pier Street

2.2.2 Utilities and Infrastructure

Hyder Consulting (with input from AECOM) have undertaken a desktop study of existing utility infrastructure services within and in the vicinity of The Haymarket and undertaken subsequent consultation with service providers as detailed in the Services Infrastructure Report (**Appendix B**). Existing essential infrastructure services for water, sewer, gas, electricity, communications and stormwater are provided to the Site.

2.2.3 Topography

The subject site is predominately occupied by the SEC car park structure and surrounding hardstand areas, and therefore has limited natural site topography. There is a level difference of approximately two metres from the higher edge of the SEC carpark at Darling Drive (approx. RL 4 AHD) to the eastern site boundary (approx. RL 2 AHD). A Site Survey has been prepared by Rygate Surveyors and is included at **Appendix C**.

2.2.4 Landscaping and Vegetation

The Site is generally sparsely vegetated with minor planter beds and small groups of trees at the north-western and south-western corners of the SEC car park. As noted, removal of this landscaping and vegetation will be undertaken as part of both SSDA4 and SSDA5.

2.2.5 Heritage and Archaeology

Heritage

A Statement of Heritage Impact (SOHI) relating to the SICEEP redevelopment has been prepared by TKD Architects and submitted with the Concept Proposal (SSDA2). The SOHI identified those heritage items that are present on the SICEEP Site, and within the vicinity.

The following heritage items (excluding archaeology) are identified as being located within or in the vicinity of the SSDA4 Site:

- Darling Harbour Rail Corridor (Section 170 Register);
- Powerhouse Museum (local significance); and
- Former Hydraulic Pumping Station No.1 (the Pumphouse) (State significance).

A location map illustrating the location of these heritage items, and other heritage items in the vicinity of the wider SICEEP Site is provided below in **Figure 11**.



Figure 11 – Heritage items within and surrounding the SICEEP Site

Archaeology

Non-Indigenous Archaeology

A Indigenous and Non-Indigenous Archaeological Summary Report has been prepared by Casey and Lowe (refer to **Appendix E**). The report (amongst other things) builds upon Casey and Lowe's original Non-Indigenous Archaeological Assessment and Impact Statement prepared and submitted in support of the Concept Proposal DA (SSDA2) and specifically relates to the subject development proposal (SSDA4).

Casey and Lowe confirm that there are no potential archaeological remains of local or State significance within the footprint of the proposed North West Plot. There is however the potential for proposed public domain works to the south of the mixed use commercial and public car park building (within future Dickson's lane) to impact on the 1870s Cormack cooperage work shed and yard (refer **Section 5.11**).

Indigenous Archaeology

The Indigenous and Non-Indigenous Archaeological Summary Report prepared by Casey and Lowe and included at **Appendix E** also builds upon the original Aboriginal Archaeological Assessment prepared by Comber Consultants in support of the Concept Proposal DA (SSDA2) and specifically relates to the subject development proposal (SSDA4).

Casey and Lowe (summarising the findings of Comber Consultants) advise that the SSDA4 Site is located outside of the original western foreshore (which has a propensity for subsurface archaeological deposits to be found given that Aboriginal occupation was most intense near coastlines and that artefacts have been found in nearby locations). Mitigation measures for unexpected indigenous archaeological finds are included at **Section 6.0**.

2.2.6 Soil and Geotechnical Conditions

A Preliminary Geotechnical Assessment Report has been undertaken by Coffey Geotechnics and included as **Appendix F**. The Report presents the findings of a desktop study, which determines the likely geotechnical and soil characteristics of the North-West Plot. The report draws upon previous geotechnical investigations carried out at the Site in making its assessment (including that completed in support of the Stage 1 DA – SSDA2).

Site Geology

The Site is predominantly on reclaimed land that was formerly part of Cockle Bay. The present day shoreline has been progressively formed by infilling, with manmade fill deposits underlain by Hawkesbury Sandstone bedrock of the Triassic Age.

Coffey Geotechnics advise that the geological conditions of the Site are expected to broadly comprise the following features:

- Variable fill;
- An in-filled palaeochannel incised within the sandstone bedrock and oriented roughly north/south;
- An igneous dyke intrusion through the sandstone bedrock, striking north west/south east;
- Possible presence of GPO fault (or sheared zone) mapped as striking in a north-east/south-west direction to the east of the Site boundary; and
- Sheared zones and joints in the Sandstone bedrock, associated with the 'GPO' Fault regionally mapped as striking north north east/south south west.
- High groundwater levels.

Subsurface Conditions

Various geotechnical investigations have previously been undertaken at the site between 1971 and 2013. Coffey Geotechnics advise that there are a range of different and distinct geotechnical subsurface profiles present across the Site, with those relevant including:

- Fill between 2.6 and 3.75 mAHD – comprising sand, sandy gravel, clay and sandy clay/silt with cobbles and boulder sized rock fragments;
- Alluvium and estuarine deposits between 0.4 to -2.3 mAHD – clayey sands and clays with occasional shell layers and organic matter, very loose to medium density with very soft to stiff consistency;
- Sandstone Bedrock between -4.8 and -10.8 mAHD

Further, Coffey Geotechnics note that groundwater was observed during previous investigations at between about 3.5m to 4m depth. Groundwater levels are not expected to be influenced in any discernible way by tidal flows from Cockle Bay. Samples collected indicate groundwater is pH neutral, and indicate a brackish to saline environment consistent with land reclamation and the proximity of Cockle Bay.

2.2.7 Site Contamination

A Site Investigation Factual Report was been prepared by Coffey Environments and submitted as part of the Stage 1 DA (SSDA2). Records indicate that the Haymarket Site has been subject to historic reclamation with filling of unknown origin along with historic uses comprising of various industrial processes (e.g. milling, brewing etc.), galvanising iron works and other metal works, various storage uses, a council depot, and a market place.

Detailed and extensive site contamination investigations have been undertaken across The Haymarket Site in order to determine the presence and extent of potential contaminants as a result of historical site activities and uses including heavy metals, fuels and oils, asbestos and organic contaminants. Site investigations reveal that the following contamination sources are present at levels generally within the acceptable health-based criteria:

- Localised TPH and PAH (oil) contamination encountered in unsaturated fill materials;
- Localised lead contaminated fill;
- Volatile hydrocarbon contamination;
- Asbestos containing materials encountered in shallow fill materials; and
- Potential and actual acid sulphate soils.

Groundwater Contamination

Groundwater within the site contains low concentrations of heavy metals, however these are considered to be representative of background levels within the locality rather than of any site specific issues. The reported concentrations are considered to be representative of background levels in the locality of the Site rather than being attributable to current and/or historical activity specific to the Site.

Detailed discussion of site-specific contamination and remedial strategies is contained within Section 5.13 of this EIS.

2.2.8 Water Cycle

Stormwater

Stormwater drainage within the Haymarket Precinct is comprised of a below ground local network and trunk drainage and overland flow paths. Stormwater is captured by surface inlet pits within roadways, pedestrian thoroughfares and landscaped areas which drain into minor pipe networks, and ultimately into major trunk stormwater culverts that discharge into Cockle Bay. Overland flow paths which bypass the drainage network flow through the Darling Harbour Precinct and also discharge into Cockle Bay.

The SSDA4 Site involves development located over part of a Sydney Water culvert. Further details with respect to the management of potential construction related impacts are detailed within Section 5 of the EIS.

Flooding

The existing SICEEP Site is currently inundated by flood waters in a range of storm events. In terms of the SSDA4 Site, it is specifically affected by overland flow paths. Refer to Section 5.10 for further details regarding the management of flood impacts.

Water Quality

There is minimal infrastructure in place within the SICEEP Site that is intended to manage the quality of stormwater runoff from the Haymarket precinct. The majority of existing runoff within the precinct discharges directly into Cockle Bay in conjunction with untreated flows from upstream external catchments.

2.2.9 Site Access and Transport

Pedestrian Access

Pedestrians can access the Haymarket from the north (and partly from the east) via a large public plaza which is located directly to the north of the SEC. The plaza is the main pedestrian connection point between the Haymarket and the remainder of the Darling Harbour Precinct.

Pedestrian connectivity to the east is obstructed by the Sydney Entertainment Centre, with direct access to the east available only via the northern periphery of this building from the subject site.

Pedestrian connections to the west are inhibited due to the location of the Light Rail Corridor and the topography of the land; however pedestrian access is presently available via an elevated pedestrian walkway from the Powerhouse Museum and a pedestrian footpath on the Pier Street overpass.

On 15 March 2013 approval was granted for the Ultimo Pedestrian Network (UPN), now known as the 'The Goods Line'. The Goods Line will deliver a linear park and pedestrian link from Ultimo to the south-western portion of The Haymarket precinct.

Cycling

The Haymarket precinct is accessible to cyclists via a number of official cycle routes including the Sydney Harbour Bridge to Anzac Bridge route, and the Anzac Bridge to Prince of Wales Hospital route. Cycle routes connecting directly with the Haymarket Site include Factory Street to the east, Hay Street to the south, Darling Drive to the west, and Darling Quarter to the north. None of these routes are in the form of dedicated cycle lanes, therefore routes are typically shared with motor traffic. All connect with the wider Sydney Cycleways Network.

Rail

The Haymarket Precinct has good rail connectivity, being located approximately 650m north-west of Central Station and 700m to the south-west of Town Hall Station. Central and Town Hall Stations are key stations in the CityRail network with excellent connectivity to the wider network.

Almost all lines on the City Rail network pass through Central Station, which also provides connections with wider NSW, Western Australia, South Australia, Queensland, and Victoria.

Light Rail

The Metro Light Rail traverses Darling Drive and Hay Street to the west of the Site. The Metro Light Rail runs from Central Station to Lilyfield via Darling Harbour, The Star Casino, Wentworth Park, Glebe and Rozelle. The nearest light rail stop to the site is Exhibition Centre, located approximately 110m to the north-west along Darling Drive, and the Hay Street, Paddy's Market stop immediately adjacent to The Haymarket site to the south.

Ferry

The Haymarket precinct is situated approximately 800m south of the Darling Harbour Ferry Terminal, 1km south of the Pyrmont Bay Ferry Wharf, and 1.2km south of the King Street Ferry Wharf. Ferries from these locations connect the Site with key locations, including Circular Quay, Milsons Point, and Parramatta. Ferries also connect the Site with a variety of tourist and visitor attractions located around Sydney Harbour.

Bus

An extensive network of bus services is located in the vicinity of the Haymarket Precinct. George Street for example is located approximately 200m to the east and is a major bus corridor with very frequent services, connecting with the wider Sydney CBD and a wide variety of suburban locations. Harris Street, 100m to the west of the Site is also a bus corridor. A major bus terminal is located at Railway Square, approximately 500m to the south of The Haymarket.

Monorail

The Paddy's Market Monorail Station is situated in the south-eastern portion of The Haymarket Site and presently connects the Site with key attractions in Central Sydney.

In March 2012, the NSW Government announced that the Monorail will cease operations on 30 June 2013. Metro Monorail Infrastructure will be dismantled as part of a separate project managed by Transport for NSW, which is scheduled to begin in August 2013.

Vehicular Access

Vehicular access to the Site is available from Exhibition Place and Darling Drive, which bound the North West Plot to the north and west respectively.

Exhibition Place is a loop road situated to the north of the storage yard and is accessed via Darling Drive. Exhibition Place loops around the Darling Harbour Operations Office, which is located under the Pier Street viaduct, and traverses past the southern façade of the Exhibition Halls, the northern façade of the SEC Car Park and to the east of the storage yard. The road is used as a pick-up/drop-off point, and also provides access to the SEC car park.

Darling Drive traverses the western edge of the Site in a north-south direction. One vehicular access point serving that portion of the SEC car park within the site boundary is provided. On-street parking for coaches and buses is available for permit holders only.

2.3 Surrounding Development

The SSDA4 Site is predominantly surrounded by transport corridors (light rail and roads) along with commercial and tourist related development. Further a field development includes educational facilities and residential. The built form surrounding The Haymarket precinct is generally medium to high density and is constructed in a wide variety of architectural styles.

A map of the key developments surrounding the Haymarket Precinct is provided at **Figure 12**. The existing and future development surrounding the Site is discussed further below.



Figure 12 – Map of surrounding development

To the north

Adjoining the SSDA4 Site to the north is the Pier Street viaduct, beneath which is the continuation of the pedestrian forecourt between the Chinese Garden of Friendship and the Exhibition Halls, access roads and the Sydney Harbour Foreshore Darling Harbour Operations Office and storage yards.

Further to the north is the remainder of the Darling Harbour precinct, including the existing Exhibition Halls (**Figure 13**) of the Sydney Convention and Exhibition Centre (to be demolished as part of SSDA1 currently under assessment). **Figure 14** illustrates the proposed development to be undertaken on the PPP Site.



Figure 13 – Eastern elevation of the Exhibition Centre



Proposed International Convention Centre



Proposed Theatre



Proposed Exhibition Centre and Public Realm



Event Deck

Figure 14 – Artist impression of proposed redevelopment of the PPP Site to the north (subject to approval of SSDA1)

To the east

Immediately adjoining the site to the east is the Sydney Entertainment Centre and its surrounding public domain area (see **Figure 15**), which will be subject to redevelopment as part of future applications. The proposed building will sit at the north-west corner of the future 'Haymarket Square' (photomontage of potential development at **Figure 16**).



Figure 15 – Sydney Entertainment Centre viewed from the north showing surrounding public domain



Figure 16 – Artist impression of Haymarket Square and surrounding future development (subject to approval of SSDA1 and subsequent detailed applications)

Source: Virtual Ideas

To the south

Immediately to the south of the subject site is the southern portion of the SEC public carpark, the demolition of which is proposed as part of this DA and also subject to approval under SSDA5. SSDA 5 also seeks consent for the erection of the first mixed-use residential building within The Haymarket precinct – located within the South-West Development Plot (refer **Figure 17**).



Figure 17 – Photomontage of the proposed South West Plot Mixed Use Residential Development (subject to approval of SSDA5)

The recently approved Ultimo Pedestrian Network (UPN) is located further to the south of the Site which will involve the redevelopment of the former Ultimo-Darling Harbour rail corridor into a linear park and pedestrian link (see **Figure 18** and **Figure 19**). The Ultimo-Darling Harbour rail corridor is listed as a state significant item under the *Heritage Act 1977* (Heritage Act).



Figure 18 – Former Ultimo-Darling Harbour rail corridor (Future UPN)



Figure 19 – Artist impression of the future UPN (subject to separate approval)

Source: ASPECT Studios and Choi Ropiha Fighera Architect

To the west

Immediately adjoining the site on its western boundary is Darling Drive, which is a two-lane road running north-south between Darling Harbour and Pyrmont/Ultimo. To the west of Darling Drive is the Metro Light Rail Line. Beyond this to the west is the Powerhouse Museum which is listed as a local heritage item (see **Figure 20**).

Darling Drive is proposed to be realigned in order to accommodate future development within the Western Plot (residential buildings / student accommodation), with the consent for the first building (Building W2) sought under SSDA 3 (see **Figure 21**).



Figure 20 – Powerhouse Museum viewed from the SEC car park



Figure 21 – Photomontage of proposed student accommodation building W2 (subject to SSDA3)

3.0 Description of the Development

This chapter of the report provides a detailed description of the proposed development. Architectural drawings prepared by Lend Lease Design are included at **Appendix I**, whilst Civil Infrastructure Drawings prepared by Hyder (**Appendix J**) and Public Domain Drawings prepared by Hassel (**Appendix K**) are also attached.

This application seeks approval for the following development:

- Site preparation works including demolition, minor excavation and remediation;
- Associated tree removal and replanting;
- Construction and use of a mixed use commercial building comprising:
 - ground level active (retail/commercial/television studio) uses and loading dock;
 - public car park (above ground);
 - ancillary commercial office parking (above ground); and
 - commercial office space;
 - building identification signage zones and 1x wall advertisement.
- Provision of vehicle access to the development from Exhibition Place;
- Public domain improvements, including provision (part) of a new east-west pedestrian laneway (known as Dickson's Lane) linking Darling Drive to the Boulevard; and
- Extension and augmentation of physical infrastructure / utilities as required.

It should be noted that the final design and make-up of the proposed ground floor active uses (i.e. retail, IQ Hub, and television studio space) will be the subject of future fitout development application/s. Details therefore provided as part of this DA submission in relation these ground floor uses should be considered in this context. A photomontage of the proposed development and its relationship to future adjacent development (subject of SSDA5) is shown in **Figure 21**.



Figure 22 – Photomontage of the proposed development (ground level view south down the Boulevard)

3.1 Design Principles

The project team's vision for The Haymarket has been to create a new vibrant quarter, nestled amongst other great neighbourhoods, and that will contribute to the onward growth and legacy of Sydney. The design objectives of the proposed development essentially seek to contribute to the achievement of The Haymarket vision whilst also contributing to the broader architecture of the PPP core facilities (SSDA1).

The building more specifically has evolved out of the following key design and planning principles (refer to the Design Report provided at **Appendix I** for full details):

- Achieve design quality focused around key functional and market driven requirements balanced with important urban and contextual responses.
- To draw inspiration from early development economics related to area land use, geology and the port development legacy of Darling Harbour and the Haymarket precinct.
- To create an innovative and unique calibre of architecture which is appropriate to The Haymarket and overall SICEEP.
- Achieve a creative façade solution that positively responds to the integration of two distinct building functions in the form of above ground parking and commercial office space
- Build upon and benchmark successful Australian mixed use commercial and public car parking developments where the design quality is of high merit and contributes in a positive manner to the immediate context and the architectural outcome.
- Recognise and embrace the site's prominence to the north (e.g. Pier Street), whilst responding to the different public realm and built form contexts to the east, south, and west.
- Deliver commercial office space of high efficiency and flexibility to meet market demand and future requirements.

3.2 Numerical Overview

Table 3 - Key development information

Component	Proposal
Site area	5,145 m ²
GFA	38,565 m ²
Height <ul style="list-style-type: none"> ▪ RL ▪ Storeys 	<ul style="list-style-type: none"> ▪ RL 51.25 (top of parapet) ▪ 12 storeys
Parking <ul style="list-style-type: none"> ▪ Public car park spaces ▪ Ancillary commercial car spaces ▪ Motorcycle ▪ Bicycle ▪ Services/courtyard/loading 	<ul style="list-style-type: none"> ▪ 400 (inc. accessible provision) ▪ 50 (inc. accessible provision) ▪ 49 spaces ▪ 97 spaces ▪ 2 rigid vehicles

3.3 Site Preparation Works

Demolition and Excavation

Construction activity on the project site involves excavation to facilitate the proposed development and services. In addition the site soils and the proximity to groundwater would suggest that dewatering of site excavations will be required.

Excavation Plans are included in the Architectural Drawings prepared by Lend Lease Design and provided at **Appendix W**. Excavation will be limited to a small portion of the site (less than 20% of the site area) to a maximum depth of RL 0.0 AHD.

Approval for the demolition of the Sydney Entertainment Centre Public Car Park is sought under both SSDA4 and SSDA5 in order to provide appropriate flexibility in terms of the staging of works within the overall redevelopment site.

Remediation

This application seeks consent for site remediation works detailed in the Site Specific Remedial Action Plan prepared by Coffey Environmental (**Appendix G**) and discussed further at **Section 5.13**. In summary, remedial works for SSDA 4 identified by Coffey include:

- Remediation excavation of Area 1, involving the removal of up to 4,420m³ of soil;
- Stockpiling of excavated soils in designated area on site pending waste classification and disposal or loaded directly into trucks for disposal using waste classification from available results;
- Monitoring of remediation excavation by an appropriately qualified engineer for visual and olfactory indications of contaminations; and
- Possible localised water management.

3.4 Built Form and Land Uses

3.4.1 Building Height

The proposed mixed use commercial and public car park building reaches a maximum height of 12 storeys (RL 51.25 AHD). The design incorporates a stepped form that increases from the south (8 storeys) to the north (12 storeys) and steps partially from the east and west boundaries - refer to **Figure 23**. The lower levels reflect a build to the boundary approach given above ground parking design requirements.

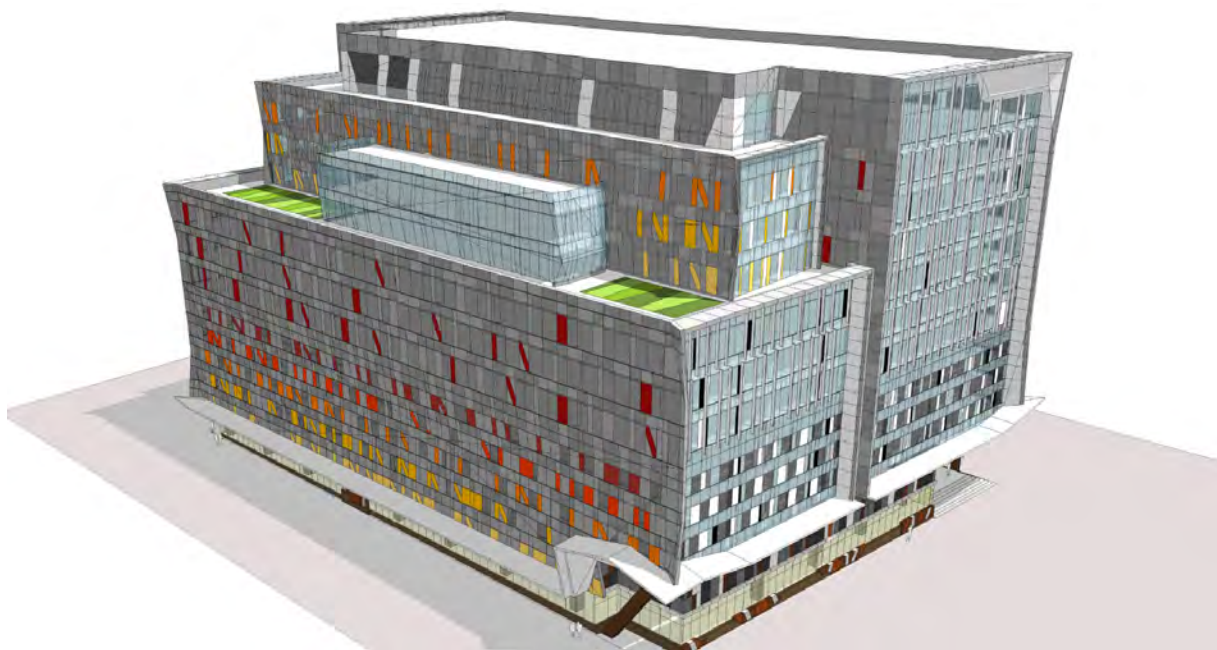


Figure 23 – 3D visualisation of the stepped built form

3.4.2 Land Use by Level

Table 4 provides an overview of the land use composition of the building level by level.

Table 4 – Land uses by floor level

Floor Level	Land uses / Development
Ground	Active uses such as television studios, retail tenancies, cafés, IQ Hub etc. Commercial lobby, car park lift lobby, vehicular access, loading dock, plant and equipment, waste storage rooms, bike access and storage
Level 1	car parking, bike parking, end of trip facilities, storage, plant and equipment
Levels 2 – 4	car parking, motor cycle parking, storage, plant and equipment
Levels 5 – 8	Commercial offices
Level 9	Commercial offices and landscaped outdoor terrace
Levels 10 - 11	Commercial offices
Level 12	Commercial offices, feature roof terrace, plant and equipment

3.4.3 Public and Commercial Car Park

The proposed building includes a 400 space public car park (with an additional 50 spaces for commercial tenant parking) located on Levels 1 to 4 (having a gross floor area of 13,599m²). The car park will be operated by a private company with parking made available to the public operated on a similar basis to the existing SEC Public Car Park. The car park is being delivered in order to meet the demand and operational requirements of the proposed redeveloped and expanded convention, exhibition, and entertainment core facilities (SSDA 1) located to the north of the site and to service other neighbouring properties such as the Powerhouse Museum.

A small amount of ancillary parking (50 spaces) will also be made available to serve commercial office component of the proposed development.

Vehicular access to the car park will be provided from a ramped entrance from Exhibition Place located at the north-western corner of the building. Ingress to the car park will be via a single lane with left-in access only, whilst egress will be via a two-lane configuration with left-out turning movements only.

Pedestrian access to the public car park will be available from the lift lobby off Dickson's Lane. Pedestrian access to the parking serving the commercial office will be available through the main central lift core.

3.4.4 Commercial Offices

The proposed building includes 7 levels of commercial office space with a total floorspace of 22,773m² located above the proposed public car park. Access to the commercial office space will be through the ground floor lobby located in the north-east corner, with direct access off the future Boulevard.

Commercial office spaces on Level 5 and Level 12 will have direct access to outdoor terrace spaces comprised of a range of hard and soft landscape treatments.

Depending upon tenant requirements, allowance is being provided for flexibility to provide for interconnecting stairs and/or voids. Final drawings providing details of any proposed tenant voids/stairs will be submitted as part of the construction certificate application.

In the event that stairs/voids are a feature of future tenant requirements, the proposal includes the provision of a skylight at roof level in order to enable natural light to filter down through the potential voids/stairs.

It is noted that the provision of potential future stairs/voids will have no bearing on the external appearance of the building.

3.4.5 Ground Level Active Uses

The proposed development includes ground-level active uses (having a total gross floor area of 1,556m²) located along the southern and eastern edges of the building. These spaces will activate key pedestrian frontages including The Boulevard and the linkage between Darling Drive and the Boulevard/Haymarket Square (referred to as Dickson's Lane).

The final use of these ground level spaces will be determined at a future stage and will be subject to separate approvals for use, fitout, signage, canopies etc. The types of active uses that this space could accommodate include television studios, retail tenancies, cafés, IQ Hub etc.

3.4.6 Signage

This application seeks consent for zones for three parapet-level building identification signs and one electronic billboard (wall advertisement) located on the northern building facade as identified in the Architectural Drawings prepared by Lend Lease Design.

The proposed building identification signs will be located and dimensioned as follows:

- North Elevation – eastern edge with dimensions of 16m by 3.7m;
- East Elevation – northern edge with dimensions of 14.6m by 3.7m; and
- Western Elevation – northern edge with dimensions of 14.7m by 3.7m.

The detailed wording, colour scheme, and logo to be included in the building identification zones will be submitted to the Director General for approval prior to the issue of the relevant Construction Certificate.

The proposed electronic billboard (wall advertisement) will be located approximately 11.6m above ground level. The wall advertisement will have dimensions of approximately 11.8m wide by 3.8m tall with an area of 44.84m². The electronic billboard will be static (no moving content) with advertising images transitioning every 45 seconds, and the transition between signage messages will be instantaneous (less than 0.1 second). No advertisement displayed is to be dominated by red, yellow, white or green, or any shape or pattern so as to result in it being readily mistaken for a rail or traffic or road sign or signal. This is discussed further at **Section 5.4.1**

Signage associated with future active ground floor uses will be addressed and incorporated within future fitout development applications.

3.4.7 External Materials and Finishes

A Schedule of Materials/Materials Sample Board which details the proposed external finishes and facade treatments has been prepared by Lend Lease Design and is provided under separate cover.

Key features and aspects of the external materials and finishes include:

- Primarily paint finished composite metal panels, and metal perforated/mesh panels combined with performance glazing.
- Colour diversity intended to generate a dynamic and striking visual composition for the development.
- Colour selection and appropriation designed to visually delight within the strong civic/public nature of the precinct
- A simple overall colour strategy designated to the four facades of the building
- A general “background” façade colour palette of metallic silver and matt platinum combined with black silicon joints and seams for the north and south facades.
- Predominately white to metallic dark grey/black colour range for the east and west facades.

3.5 Landscaping and Public Domain

SSDA4 seeks consent only for public domain works within the immediate vicinity of the proposed mixed use commercial and public car park building. These works are detailed in the Public Domain Plan prepared by HASSELL (**Appendix K**) and includes the northern edge of Dickson’s Lane and the paved access areas around the building.

As outlined within the Concept Proposal (SSDA2), Dickson’s Lane will ultimately provide:

- an 8m wide pedestrian only access to Darling Drive;
- an alternative local entrance to The Haymarket from the West; and
- a small scale, local laneway experience through its planned eclectic character and design treatment (refer to **Figure 24**).



Figure 24 – Artist's impression of Dickson's Lane during the day

A further key aspect of the proposed public domain works relate to the feature tree located in the north-east corner of the site, adjoining the main building entry lobby and forecourt. Other public domain works in the immediate vicinity of the SSDA4 site, including Dickson's Lane (remaining portion) and Darling Drive, will be delivered through the approvals for and redevelopment of adjoining sites within The Haymarket (SSDA3 and SSDA5).

3.6 Traffic, Access and Parking

Public Car Parking and Tenant Parking

The proposed development provides a car park with a total of 400 car spaces and 49 motorcycle spaces in order to support the operations of the new SICEEP core facilities. A small amount of additional car parking will be provided within the public car parking area (50 spaces) for the use of commercial office tenants which will be managed by the public car park operator.

The car park will be managed by a private operator and will be publicly accessible 24 hours per day, seven days per week with access controlled via an electronic ticketing system.

Loading Dock and Servicing

Access to the building's loading dock will be provided via a separate driveway located to the east of the car park entrance with access to Exhibition Place. The loading dock access provides for two-directional vehicle movements from the street through to the loading dock. The loading dock includes a raised platform with the ability to accommodate two service vehicles.

Pedestrian Access

The Public Domain Plan prepared by Lend Lease Design (**Appendix K**) provides for public pedestrian access along all four edges of the proposed mixed use commercial office building. Separate pedestrian access points will be provided to all retail tenancies from the public domain, whilst pedestrian access to the commercial office building and public car park will be provided from separate lobbies.

3.7 Water Cycle Management

The Flooding, Stormwater and WSUD Report prepared by Hyder Consulting (**Appendix L**) includes details of the proposed stormwater drainage and water cycle management measures proposed for the North West Plot. Detailed proposals for the North West Plot operate within the water cycle management framework established under the Stage 1 Concept Proposal (SSDA2).

In particular, SSDA4 seeks consent for the upgrade and amplification of the existing stormwater culverts located within the building footprint, protection of existing stormwater infrastructure and connection of the new mixed use commercial office building and surrounding public domain to the stormwater system. On-site stormwater detention is not provided due to the lower-catchment location of the site.

3.8 Environmentally Sustainable Development

The Sustainability Report prepared by Lend Lease Design (**Appendix M**) details the sustainability strategy and detailed design measures which will be implemented within The Haymarket precinct and the North West Plot mixed use commercial office building. Key sustainable design measures include:

- High efficiency chilled water plant ;
- High efficiency motors;
- Low-temperature variable air volume air distribution;
- Efficient lighting;
- High façade performance; and
- Natural ventilation of car park.

A Green Building Council of Australia (GBCA) 5-Star Green Star rating is being targeted using the GBCA Office v3 rating tool, which equates to 'Australian excellence' in sustainable building development. A minimum 4.5 star NABERS Energy base building rating is also being targeted.

3.9 Infrastructure and Services

A Services Infrastructure Report has been prepared by Hyder and is provided at **Appendix B**. The Report details the existing infrastructure available at the Site, and identifies likely points of future connection, as well as associated upgrades and augmentation of services to facilitate the proposed development. The detailed design of the services requirements is currently being undertaken in consultation with the relevant service providers, and will be completed prior to the commencement of works on the Site.

Water

A DN200 CICL water main is currently located within the footprint of the North West Plot, in what is currently Lackey Street. This main is proposed to be relocated to within The Boulevard, where the existing connections from Little Pier Street and any other locations will have to be identified and reinstated.

The private water services will be taken off the relocated DN200 CICL water main to supply potable water and fire requirements to the Site. This concept is currently being developed with Sydney Water.

Sewer

A DN300 CL water main is currently located within the Site, in what is currently Lackey Street. This main is proposed to be relocated to within The Boulevard, where existing connections from Little Pier Street and any other locations will have to be identified and reinstated. The new sewer main in The Boulevard will be connected further upstream in Pier Street.

Gas

No gas mains were identified in the immediate vicinity of the Site. The nearest main is a DN100mm 1050kPa secondary main in Little Pier Street. It is proposed to extend a gas main to the site via the Boulevard and the proposed Theatre Lane and Darling Drive.

Electricity

The supply of electricity to The Haymarket precinct has been initiated under the Concept Proposal (SSDA2). Ongoing discussions are being undertaken with Ausgrid in regards to the design and supply of electrical infrastructure, yet it is proposed that two new HV feeders from the Camperdown Zone Substation will be provided to the precinct. It is expected that an underground HV supply will enter the precinct from the north along Darling Drive and connect to a substation located with the Site.

Telecommunications

Hyder has identified that there is a range of telecommunication infrastructure in the vicinity of the Site. New telecommunication infrastructure to service the entire Haymarket precinct is expected to be provided by NBNCo.

3.10 Waste Management

A Waste Management Plan has been prepared by Waste Audit and Consultancy Services (**Appendix N**). This plan identifies the anticipated waste generation volumes, waste streams, storage requirements, management and collection frequencies and procedures. The location of waste storage rooms at the ground floor are indicated on the Architectural Drawing (**Appendix I**) and these have been designed to accommodate the predicted waste volumes. Tenants of the building (or the relevant contractors) will be responsible for transporting waste to the ground-level storage rooms, from which it will be collected via the loading dock for disposal daily on weekdays.

3.11 Construction Management and Staging

A Construction Management Plan has been prepared by Lend Lease for the PPP Site (**Appendix L**) which generally details:

- construction planning and methodology;
- site establishment;
- environmental and safety management;
- construction waste management;
- stormwater and erosion control;
- noise and vibration management;
- air quality management;
- construction traffic and public access; and
- community relations management.

The Construction Management Plan will inform the preparation of a detailed Site Construction and Environmental Management Plan which will be finalised prior to the issue of a Construction Certificate.

Subject to commercial and contractual arrangements the proposed building may be developed in two stages generally as follows:

- Stage 1 (Ground to Level 4)
 - ground level retail tenancies and commercial spaces;
 - public car park levels; and
 - vehicular access and loading dock.
- Stage 2 (Levels 5-12)
 - Commercial office levels; and
 - Ground level public domain treatments.

Should the development of the site occur in two stages, temporary architectural treatments to the façade and upper level will be provided for Stage 1 in accordance with the architectural drawings included at **Appendix I** which will be in place.

It is therefore requested that the conditions of approval permit the staged issuing of separate Construction Certificates and Occupation Certificates for each development stage.

4.0 Consultation

Consultation is recognised as an important part to the successful delivery of the SICEEP Project, with the NSW Government speaking with industry and stakeholders from day one of the Project's inception. This consultation has continued to inform the concept proposal for The Haymarket, which lays the foundations for this SSDA.

An addendum Stakeholder and Community Engagement Report (**Appendix P**) has been prepared by The Hornery Institute drawing upon the stakeholder and community engagement program undertaken prior to the lodgement of any DAs for the SICEEP Project, as well as providing specific discussion on the proposed development (SSDA4). More specifically, the Report provides commentary with respect to:

- The current community context;
- Outcomes from the baseline and pre-consultation engagement programs;
- Site specific matters raised; and
- Summarises design mitigation in response to issues raised.

In addition to this baseline consultation for The Haymarket precinct and overall SICEEP Project, individual consultants for this proposal have undertaken consultation with relevant parties during the preparation of their reports.

The level of consultation undertaken up to the lodgement of this DA is considered to be appropriate and justified and exceeds minimum requirements of the Department of Planning's Major Project Community Consultation Guidelines (October 2007) – therefore meeting the DGRs.

A summary of the initial consultation process undertaken to-date is provided below.

4.1 Community Context

One of the initial stages in the consultation process was to identify and understand the community catchment. Three community catchments were identified:

- Local Catchment – the residential, commercial and institutional site neighbours, together with those agencies and opinion formers that have an interest in the precinct;
- Primary Catchment – residents and businesses within the suburbs of Haymarket Pyrmont and Ultimo; and
- Secondary Catchment – residents and businesses throughout Greater Sydney together with interstate and overseas visitors to Darling Harbour.

4.2 Engagement Programs

Three key engagement platforms have been used across all stakeholder groups in the lead up to the lodgement of this SSDA, specifically:

- printed material – including mail-outs of letters, newsletters, project fact sheets, postcard feedback forms;
- face-to-face communication – manned model displays, community forums, one on one briefings, roundtable sessions, qualitative research workshops, working groups, presentations, design workshops; and
- Technology – project telephone number, project email, project website, on-line forum.

The Stakeholder and Community Engagement Report elaborates further on the above engagement activities.

4.3 Outcomes from Consultation

4.3.1 Baseline Consultation

Early engagement was undertaken by both NSW and Darling Harbour Live during the request for proposals stage in order to build their understanding of the stakeholder and community environment, before moving ahead with developing the master plan and detail design for the SICEEP Project.

The key findings from this baseline consultation exercise are detailed within Stakeholder and Community Engagement Report.

4.3.2 SSDA1/SSDA2 Pre-lodgement Consultation

Building on the baseline consultation, Darling Harbour Live has undertaken a further accelerated program of stakeholder and community engagement (in conjunction with NSW) since being selected as the preferred proponent.

The specific feedback received during this phase of consultation is detailed within the Stakeholder and Community Engagement Report. Given the significance of the SICEEP Project and the benefits to be delivered across the City and State there was revealed to be widespread support for the project from residents (sampled) throughout Greater Sydney. There is generally overwhelming support for the SICEEP Project from Precinct Stakeholders, Opinion Formers, and Industry – all of which acknowledge the substantial benefits a project like this will deliver.

The key issues raised during the SSDA1/SSDA2 pre-lodgement consultation engagement program have been identified based on the opinions expressed by consultation participants, and have been considered by Darling Harbour Live during the design development phase. A summary of how key issues have been addressed through the project design is included within the Addendum Stakeholder and Community Engagement Report (**Appendix P**).

4.3.3 SSDA4 Specific Findings

Section 4 of the Stakeholder and Community Engagement Report provides a detailed summary of the consultation conducted specifically for SSDA4. A range of stakeholders were engaged in this process, ranging from state authorities and City of Sydney Council to local residents and the general public. Matters raised during the consultation were both positive and negative, with general support for the provision of student housing, mixed with concerns over traffic and points of clarification on the proposal. Specific matters raised in regards to SSDA4 included:

- The provision of public open space in the precinct and the how it can be used by a variety of community members;
- The provision of social and recreational amenity to meet the needs of the increasing community;
- Potential for increased traffic on Darling Drive and its broader implications for the local area;
- A reduction in car parking in the Haymarket along with an increase in the local population;
- Concern over the adequacy of the public transport provision; and
- Concern over the long term management of the area in regards to waste management and loading arrangements.

A detailed response to each of these matters is provided in Section 5 of **Appendix P**.

It is noted that the proposed development will be placed on public exhibition for a minimum of 30 days in accordance with clause 83 of the *Environmental Planning and Assessment Regulation 2000*. During the public exhibition period Council, State agencies and the public will have an opportunity to make submissions on the project.

5.0 Environmental Assessment

This chapter of the EIS contains our assessment of the environmental effects of the proposed development as described in the preceding chapters of this report.

Under Section 79C(1) of the EP&A Act, in determining a development application the consent authority has to take into account a range of matters relevant to the development including the provisions of environmental planning instruments; impacts of the built and natural environment, the social and economic impacts of the development; the suitability of the site; and whether the public interest would be served by the development.

The assessment includes only those key matters under Section 79C(1) that are relevant to the proposal. The key planning issues associated with the proposed development are listed in **Table 5** below.

Table 5 – Planning Issues

Planning Issues	Assessment	
	SEE	Technical Study
Environmental Planning and Assessment Act 1979	Section 5.2	N/A
Compliance with Planning Policies	Section 5.3	N/A
Compliance with Planning Instruments	Section 5.4	N/A
Consistency with Stage 1 SSDA	Section 5.5	Appendix I
Design Excellence	Section 5.6	Appendix I and T
Built Form and Urban Design	Section 5.7	Appendix I
Visual and View Impact	Section 5.8	Appendix U
Transport and Accessibility	Section 5.9	Appendix V
Water Cycle Management	Section 5.10	Appendix L
European Heritage	Section 5.11	Appendix D
Geotechnical	Section 5.12	Appendix F
Contamination	Section 5.13	Appendix G and H
Reflectivity	Section 5.14	Appendix W
Wind Impact	Section 5.15	Appendix X
Noise and Vibration	Section 5.16	Appendix Y
Ecologically Sustainable Development	Section 5.17	Appendix M
Building Code of Australia and Accessibility	Section 5.18	Appendix Z and BB
Infrastructure and Services	Section 5.19	Appendix B
Crime and Public Safety	Section 5.20	Appendix BB
Environmental and Construction Management	Section 5.21	Appendix O
Air Quality	Section 5.22	N/A
Development Contributions	Section 5.23	N/A
Site Suitability	Section 5.24	N/A
Public Interest	Section 5.25	N/A

5.1 Director-General's Environmental Assessment Requirements

Table 1 in Section 1.5 provides a summary which sets out the individual matters listed in the DGRs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

5.2 Environmental Planning and Assessment Act 1979

State Significant Development

The EP&A Act establishes a specific assessment system to consider projects classed as State significant development (SSD). SSD is development deemed to be of significance to the State and for example includes projects located in precincts regarded as important by the NSW Government, such as Darling Harbour. As noted in **Table 6**, the proposed development the subject of this DA is classed as SSD.

Section 83B of the EP&A Act relates to staged development applications. A staged DA is one that sets out concept proposals for the development of a site, and for which detailed proposals for separate parts of the site are to be the subject of subsequent development applications. A Stage 1 DA (SSD 13_5878) was lodged for The Haymarket with the Department on 15 March 2013, seeking consent for general development components and parameters. This Stage 1 DA is still under assessment by the Department.

This DA represents one of the initial detailed 'Stage 2' DAs within The Haymarket, seeking consent for the development of a mixed use commercial office building with a public car park and public domain works within the North West Plot of The Haymarket.

Section 83D of the EP&A Act provides that while any consent granted on the determination of a staged development application for a site remains in force, the determination of any further development application in respect of that site cannot be inconsistent with that consent. Whilst the Stage 1 DA for The Haymarket is still under assessment by the Department, the development the subject of this proposal has been prepared in accordance with the Stage 1 DA.

This EIS has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed development. **Table 6** provides an assessment of the proposed development against the objects of the EP&A Act.

Table 6 – Objects of the EP&A Act 1979

Object	Comment
5(a)(i) To encourage the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment.	<p>The development of the North-West Plot will contribute to the proper management, development and conservation of the natural and artificial resources of the Site.</p> <p>In particular, measures outlined in the Sustainability Report prepared by Lend Lease and included as Appendix M will be implemented to ensure the conservation of natural resources throughout the construction and operational phases, and existing artificial resources and infrastructure will be retained where practicable.</p>

Object	Comment
	The development of the North-West Plot will contribute to the conservation of energy and water resources, a reduction in construction and operational waste generation and will promote the welfare of future building occupants by ensuring a high level of indoor environmental quality.
5(a)(ii) To encourage the promotion and co-ordination of the orderly economic use and development of land.	The proposed development involves the orderly redevelopment of the North West Plot for the provision of commercial office, active ground floor and public car parking uses to support the operations of the SICEEP precinct. The Proposal will promote economic growth and make greater use of an underutilised Site in a prime CBD location.
5(a)(iii) To encourage the protection, provision and co-ordination of communication and utility services.	The Services Infrastructure Report (Appendix B) provides details Concept Proposal would not impact on the provision or coordination of communication and/or utility services. Relevant utility providers have been consulted during the development of the proposal.
5(a)(iv) To encourage the provision of land for public purposes.	The North West Plot supports the provision of a substantial quantum of public domain works, to the benefit of existing and future residents, workers, and the wider community, as part of The Haymarket precinct and overall SICEEP project.
5(a)(v) To encourage the provision and co-ordination of community services and facilities.	The proposal, as part of the broader Haymarket precinct and overall SICEEP redevelopment, supports the provision of community services and facilities. In particular, the provision of public car parking is essential to support the ongoing functionality and access to the community facilities within the SICEEP core facilities.
5(a)(vi) To encourage the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats.	The proposal would be undertaken in a highly modified and disturbed urban environment, and would not impact on biodiversity values. The Site is not considered to have habitat suitable for any threatened flora and fauna, and the only vegetation proposed to be removed are introduced street trees.
5(a)(vii) To encourage ecologically sustainable development.	The proposed development accords with the principles of Ecologically Sustainable Development, as set out in Schedule 2 of the EP&A Regulation 2000. This is further considered in Section 7.3 of this EIS.
5(a)(viii) To encourage the provision and maintenance of affordable housing.	Not applicable.
5(b) To promote the sharing of the responsibility for environmental planning between different levels of government in the State.	Extensive consultation has been undertaken with various levels of government and government agencies during the preparation of this proposal, and all government agencies will be afforded the opportunity for further input into the development process during the public exhibition process.
5(c) To provide increased opportunity for public involvement and participation in environmental planning and assessment.	The community consultation carried out assisted the development of the proposal and is detailed in Section 3 of this EIS. Further consultation will be carried out prior to the commencement of construction and throughout the construction period.

5.3 Compliance with Planning Policies

SSDA4 is generally consistent with the provisions of the relevant planning policies identified in the DGRs, as detailed in the following sections and other supporting technical information appended to the report.

5.3.1 NSW 2021

NSW 2021 is a long-term plan to deliver services in NSW, and sets clear priorities to guide government decision-making and resource allocation.

NSW 2021 is based around five strategies to rebuild the economy, provide quality services, renovate infrastructure, restore government accountability, and strengthen our local environment and communities. NSW 2021 includes numerous goals that are relevant to the site, such as 'grow patronage on public transport by making it a more attractive choice', 'build liveable centres', and 'enhance cultural, creative, sporting and recreation activities'. NSW 2021 also aims to focus growth around existing transport hubs.

The proposed development is consistent with the goals of NSW 2021 in that it aims to:

- encourage patronage on public transport by providing employment generating floorspace in close proximity to Metro Light Rail, rail, bus and ferry services.
- enhance the 'liveability' of Haymarket and its surrounding neighbourhoods by providing:
 - employment opportunities in close proximity to public transport and high density residential developments;
 - improved amenity in the public domain; and
 - improved pedestrian connectivity with surrounding precincts.
- grow business investment in NSW by providing infrastructure to support the SICEEP core facilities and additional commercial office floorspace to support growth.

5.3.2 Metropolitan Plan for Sydney 2036

The Metropolitan Plan for Sydney aims to provide an integrated planning framework to manage Sydney's growth to 2036. The proposed development is consistent with the general objectives of the Metropolitan Plan for Sydney in that it:

- will contribute to making Sydney more compact and connected by substantially increasing commercial density in an underutilised area of the CBD with excellent public transport links;
- will strengthen Sydney's role as a globally competitive city by substantially improving the amenity and vitality of a crucial site;
- will strengthen links to South-East Asia by complementing the redevelopment of the Sydney International Convention, Exhibition, and Entertainment Precinct, and embracing the cultural diversity of the neighbouring Chinatown precinct;
- will provide local opportunities for office workers and visitors to walk, cycle, or use public transport; and
- will encourage growth in close proximity to existing light rail, rail, bus and ferry services.

5.3.3 NSW Long Term Transport Masterplan

The NSW Long Term Transport Masterplan was published by Transport for NSW in December 2012. The Masterplan focuses on key transport challenges identified during an extensive consultation process, and sets out how the NSW Government aims to respond by integrating transport services, modernising the transport system, growing the network to meet future demand, and maintaining important road and public transport assets.

The proposed development is consistent with the Masterplan in the following ways:

- it supports the expansion of the Light Rail System, by providing employment opportunities in direct proximity to existing Metro Light Rail stations;
- it will assist in unclogging the Sydney CBD transport system by connecting more people to existing Light Rail Infrastructure and encouraging patronage on an existing network with spare capacity;
- it will encourage walking by connecting into the proposed street network within the Haymarket Site, permitting east-west connections into surrounding areas that have never before existed and to 'The Boulevard', a major north – south pedestrian thoroughfare that will connect the Site and the surrounding locality with the remainder of the Darling Harbour Precinct;
- it will encourage public transport use by providing employment opportunities in close proximity to light rail, rail, bus and ferry services; and
- it will encourage cycling through the provision of end of journey facilities and secure bicycle parking for staff.

5.3.4 Sydney City Draft Subregional Strategy

The Sydney City Draft Subregional Strategy is applicable to the City of Sydney LGA. The Strategy sets actions for the subregions of the metropolitan area in order to ensure local delivery of the objectives set out within the Metropolitan Plan for Sydney. The proposed development is consistent with the Draft Subregional Strategy in that it:

- provides for increased employment floorspace on a significant renewal site that is strategically located within 'Global Sydney';
- supports nearby strategic employment centres;
- will encourage more sustainable travel behaviour through locating employment uses within walking distance of light rail, rail, bus, and ferry services, whilst improving access to transport via walking and cycling networks;
- provides new employment floorspace within an existing urban area that is strategically located in close proximity to transport, open space, and existing employment centres;
- creates a built form that will achieve design excellence;
- involves infill development which will assist in containing Sydney's urban footprint;
- incorporates design features and construction methods that will assist with tackling climate change and protecting Sydney's natural environment; and
- supports the provision of increased, improved and accessible open space on the Site.

5.3.5 Additional Relevant Planning Policies

The proposed development also demonstrates consistency with key planning policies identified in the DGRs, as demonstrated in **Table 7** below.

Table 7 – Compliance with relevant planning policies

Policy	Compliance
Sustainable Sydney 2030	<p>The proposed development is generally in accordance with the aims of Sustainable Sydney 2030.</p> <p>Key measures include:</p> <ul style="list-style-type: none"> ■ reducing greenhouse gas emissions by designing for efficient energy use; ■ supporting increased direct and indirect employment in the entertainment and retail sectors; ■ supporting public transport usage by encouraging Rail/Light Rail patronage; and ■ providing new and upgraded recreational and cultural facilities to promote social interaction and community cohesion.
Infrastructure NSW SICEEP Urban Design and Public Realm Guidelines	<p>Due regard has been given to the Urban Design and Public Domain Guidelines in the design of the proposed mixed use commercial and public car parking building. The Design Report included at Appendix I provides a summary of how the proposal responds to key aspects of the Urban Design and Public Domain Guidelines.</p>
City of Sydney Chinatown Public Domain Plan	<p>The proposed development is consistent with the Chinatown Public Domain Plan. Whilst the Site is not within the boundary of the study area, the Chinatown Public Domain Plan identifies that the existing SEC Site stymies pedestrian connectivity between Chinatown and Darling Harbour, and that any future redevelopment of the SEC Site would present an opportunity to improve connectivity and provide a plaza that addresses Chinatown.</p> <p>The proposed development will provide improved connectivity between Chinatown and Darling Harbour through the creation of a new street network</p>
Development Near Rail Corridors and Busy Roads-Interim Guideline	Refer Section 5.16.
Planning Guidelines for Walking and Cycling	<p>The proposed development will improve walkability and cycle access across the City through the provision of new on and off-road routes, active transport facilities, and wayfinding signage. The proposed development will improve connectivity to the surrounding street network to the Sydney CBD, Haymarket and Pyrmont/Ultimo.</p>
NSW Bike Plan 2010	<p>The proposed development includes a total of 90 spaces for secure staff bike parking and additional public bike parking within the immediate vicinity of the site for visitors.</p>
Integrating Land Use and Transport Policy Package	<p>The proposed development will provide a substantial quantum of employment floorspace in the CBD with excellent public transport links. It proposes employment growth in close proximity to existing Metro Light Rail stations and railway stations, and will provide local opportunities for office workers and visitors to walk or cycle.</p>
Sydney's Light Rail Future	<p>The proposal recognises the expanded role light rail will play in Sydney's transport future, and encourages the utilisation of nearby Light Rail Stations as the main public transport node for The Haymarket.</p> <p>The appeal of light rail to future workers and visitors will be further enhanced by the planned completion of the Dulwich Hill to Lilyfield light rail extension and increased frequency.</p>
Cycle Strategy and Action Plan 2007-2017	<p>The proposed realignment of Darling Drive (subject to separate application) is planned to accommodate a separated cycleway along the western alignment of Darling Drive and will form part of the City of Sydney's 'R8 Pyrmont – Moore Park' proposed regional cycle network. The mixed use commercial office building within the North West Plot will include end of journey facilities and secure bicycle parking to encourage use of existing and planned cycling infrastructure</p>

Policy	Compliance
Healthy Urban Development (HUD) Checklist	The proposed development is consistent with the HUD checklist in that it: <ul style="list-style-type: none"> promotes walking, cycling and public transport, and improved connectivity to the existing urban network; will encourage local employment to reduce journey-to-work times; and provides a safe urban environment designed with regard to CPTED principles.
Waste Classification Guidelines (DECC 2008)	Refer Appendix G .
Heritage Council Guidelines Assessing the Significance of Archaeological Sites and Relics	The Heritage Council Guidelines are addressed in Appendix D and E , and Section 5.11 of this report.
Crime Prevention Through Environmental Design principles	CPTED principles are addressed in Appendix BB and Section 5.20 of this report.

5.4 Compliance with Planning Instruments

The proposal's consistency and compliance with the relevant statutory plans is located in **Table 8** or more detail below.

Table 8 – Compliance with relevant planning instruments

Instrument	Comments
SEPP (State & Regional Development)	<p>Pursuant to the SEPP a project within the Darling Harbour Site will be SSD if it has a capital investment value (CIV) of \$10 million or more.</p> <p>The proposed North-West Plot development has a CIV of over \$10 million, and is therefore identified as SSD and considered to be development of State and/or Regional Significance. This EIS has accordingly been prepared in support of the DA.</p>
SEPP (Infrastructure)	The proposed development triggers consultation with NSW Roads and Maritime Services (RMS) under the provisions of Schedule 3 of the SEPP as the proposed development will generate over 10,000m ² of commercial floorspace and accommodate a public car park for over 200 motor vehicles.
SEPP 1 Development Standards	The proposal does not comply with a development standard within SEPP 64 - being clause 22(2)(g). A SEPP 1 Objection is accordingly proposed, included at Appendix Q , which demonstrates compliance with the standard is unnecessary and unreasonable.
SEPP 55 (Remediation of Land)	<p>Clause 7 specifies that a consent authority must not consent to the carrying out of any development on land unless it has considered whether land is contaminated and if the land is contaminated, it is satisfied that the land is/can be suitable for the proposed development.</p> <p>A Remedial Action Plan has been prepared for the Site by Coffey Environments and is included as Appendix G. The Plan has been summarised in Section 5.13 of this Report. In summary, the Plan considers that the Site can be made suitable for the proposed development and future uses, and outlines a strategy to ensure that the requirements of SEPP 55 are appropriately addressed.</p>
Draft SEPP (Competition)	The proposed Concept Proposal is consistent with the aims of the Draft SEPP (Competition) in that it will promote economic growth and competition within NSW.

5.4.1 State Environmental Planning Policy No.64 – Advertising and Signage

State Environmental Planning Policy No 64- Advertising and Signage (SEPP 64) applies to all signage that under an environmental planning instrument can be displayed with or without development consent and is visible from any public place or public reserve. The Architectural Drawings (**Appendix I**) identify zones for three building identification signs which illustrate the indicative location and size of future signage to buildings along with details of a proposed wall advertisement.

Under clause 8 of SEPP 64, a consent authority must not grant consent for any signage application unless the consent authority is satisfied that the proposal is consistent with the objectives of the SEPP and with the assessment criteria which are contained in Schedule 1.

Building Identification Signage

Under clause 9 of SEPP 64, Part 3 does not apply to 'building identification signs' (amongst others). Therefore, as Part 3 of SEPP 64 does not apply to the proposed building identification signage, the requirements to refer the application to the RMS, to advertise the development, as well as the size restrictions, etc. are not applicable.

Table 9 below demonstrates the consistency of the proposed building identification signage zones with the assessment criteria contained in Schedule 1 of SEPP 64.

Details of the exact content, materiality, and illumination etc. of signs within these zones will be the subject of approval by the Director General prior to the issue of the relevant CC.

Table 9 – Compliance with the Schedule 1 Assessment Criteria of SEPP 64

Assessment Criteria	Comments	Compliance
1 Character of the area		
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	The proposed development is compatible with the desired character for new buildings within the Darling Harbour precinct, which should emphasise the integration of The Haymarket precinct into the urban context and fabric of the Sydney CBD.	Y
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	The proposed development is generally consistent with the nature and siting of building signage within the Darling Harbour precinct, and provides a consistent approach to signage within the SICEEP Site.	Y
2 Special areas		
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	The proposed signage is consistent with the provision of signage within the Sydney CBD, Darling Harbour and Cockle Bay and will not detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, open space areas or waterways.	Y
3 Views and vistas		
Does the proposal obscure or compromise important views?	The proposed signage is integrated with the proposed buildings and therefore will not result in any obstruction of views, and the location and content of signage will not otherwise compromise important views within the precinct.	Y

Assessment Criteria	Comments	Compliance
Does the proposal dominate the skyline and reduce the quality of vistas?	The proposed signage will sit below the ridgeline of the proposed building and will not dominate the skyline of the Pyrmont/Ultimo skyline.	Y
Does the proposal respect the viewing rights of other advertisers?	The proposed signage does not impact upon the viewing rights of other advertisers.	Y
4 Streetscape, setting or landscape		
Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?	The scale, proportion and form of the proposed signage is consistent with the setting of the proposed building in terms of form and setting within the context of the Sydney CBD.	Y
Does the proposal contribute to the visual interest of the streetscape, setting or landscape?	The proposed signage contributes to the visual interest of The Haymarket precinct by contributing to the identification and recognition of the precinct as a continuation of the Sydney CBD.	Y
Does the proposal reduce clutter by rationalising and simplifying existing advertising?	The integrated provision of signage zones during the architectural design phase establishes a rationalised signage strategy which is consistent with the architecture of the building.	Y
Does the proposal screen unsightliness?	The proposed signage is integrated with the architecture of the proposed buildings and will be applied to building facades.	N/A
Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	The building identification signage is fixed to the façade and does not protrude above the upper building height of the proposed building.	Y
Does the proposal require ongoing vegetation management?	The proposed signage will not require ongoing vegetation management.	Y
5 Site and building		
Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?	The proposed signage has been designed to be fully compatible with the proposed building and is compatible with the architecture of the mixed use commercial building.	Y
Does the proposal respect important features of the site or building, or both?	The proposed signage has been located in the most architecturally appropriate locations to assist in place identification and wayfinding.	Y
Does the proposal show innovation and imagination in its relationship to the site or building, or both?	The proposed signage zones have been fully integrated with the building architecture and the detailed design of building identification signage will be undertaken with input from the project architect.	Y
6 Associated devices and logos with advertisements and advertising structures		
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	All illumination of future signage will be fully integrated with the building structure.	Y
7 Illumination		
Would illumination result in unacceptable glare? Would illumination affect safety for pedestrians, vehicles or aircraft?	Illumination of signage will not result in unacceptable glare, and the location of the proposed signage within a highly urbanised area will be such that the additional illumination of building identification signage will not adversely impact upon safety for pedestrians, vehicles or aircraft.	Y
Would illumination detract from the amenity of any residence or other form of accommodation?	The location and orientation of signage is such that it will not impact on nearby residential receivers.	Y

Assessment Criteria	Comments	Compliance
Can the intensity of the illumination be adjusted, if necessary? Is the illumination subject to a curfew?	Darling Harbour is an established tourism precinct which will accommodate activity well into the evening and night time. As such it is not considered necessary or appropriate to impose a curfew on the illumination of signage. Illumination of signage, including any dimming measures, will be incorporated in the detailed design of precinct signage.	Y
8 Safety		
Would the proposal reduce safety for any public road?	The proposed building identification would be static and is consistent with other building identification signage within the City of Sydney. Views to the signage from public roads are generally limited to those from Pier Street and will not impact upon road safety.	Y
Would the proposal reduce safety for pedestrians/cyclists?	The proposed signage will be located above ground level and will not distract from essential sight lines for pedestrian and cyclists.	Y
Would the proposal reduce safety for pedestrians, particularly children, by obscuring sightlines from public areas?	The proposed signage will be integrated with the proposed buildings and will not significantly obscure sight lines from public areas.	Y

Wall Advertisement

The Wall Advertisement Impact Study prepared by ASPECT Studios and provided at **Appendix R** includes an assessment of the proposal against the provisions of SEPP 64, and fulfils the requirements under Clause 17(3)(a).

As the wall advertisement has a display area greater than 20m² and is located more than 8m above ground level a copy of the application must be provided to the RMS at the same time as the application is publicly advertised and exhibited in accordance with clause 17 of SEPP64. However, as the wall advertisement is not located within 250m of a classified road, the concurrence of Roads and Maritime Services to this application (in terms of SEPP 64) is not triggered. Further as the size of the wall advertisement is less than 45 square metres, clause 19 of SEPP 64 does not apply to the assessment of the application.

The assessment at **Appendix R** finds that the proposed wall advertisement is consistent with the provisions of SEPP 64 and that the overall development will result in an improvement in the local environmental quality as a result of the removal of two existing wall advertisements.

A SEPP1 Objection has been prepared by JBA to the development standard at clause 22(2)(g) of SEPP 64 (refer to **Appendix Q**) which relates to the location of both a building identification sign and a wall advertisement on the same building elevation. The SEPP1 Objection demonstrates that the proposed variation to the development standard is justified and satisfies the tests established by the LEC for SEPP 1 Objections, in that:

- The SEPP 1 Objection is 'well founded' because the objectives of the standard are achieved notwithstanding non-compliance with the standard.
- The strict application of the standard would be both unreasonable and unnecessary in the circumstances of the case.
- The strict application of the standard would hinder the attainment of the objectives specified in Section 5(a)(i) and (ii) of the EP&A Act.

- The non-compliance with the development standard does not raise any matters of State and regional planning significance and will assist with the attainment of policies.
- There is no public benefit in maintaining the development standard adopted by the environmental planning instrument for this site.

In light of the above it is considered that the proposed wall advertisement is appropriate and acceptable with regard to the provisions of SEPP 64.

5.4.2 Sydney Harbour Catchment REP

The Site is identified within the following areas under the *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (SREP):

- the Sydney Harbour Catchment Area;
- the Foreshores & Waterways Area Boundary; and
- the City Strategic Foreshores Area.

Part 3, Division 2 within the SREP refers to matters which are to be taken into consideration by consent authorities before granting consent for development. **Table 10** illustrates the proposal's consistency with the relevant provisions and matters for consideration set out in Clauses 20 to 27 of the SREP.

Table 10 – Consistency with the relevant provisions of the SREP

Relevant matters for consideration	Comment
Biodiversity, ecology and environment protection	Specific WSUD measures will be implemented into future applications where appropriate to manage stormwater runoff and water quality. Vegetation proposed within the public domain will incorporate a range of native species contributing to biodiversity, and will enhance the ecological qualities of the Site.
Public access to, and use of, foreshores and waterways	The proposed development improves access to the Sydney Harbour Foreshore through upgrading elements of the public domain and through the inclusion of a new shared pedestrian/cycle path on Darling Drive.
Maintenance of a working harbour	The proposal does not relate to 'working waterfront' land, therefore no 'working harbour' uses will be lost as a result of the proposed development.
Interrelationship of waterway and foreshore uses	The proposal does not directly impact upon access to or uses within the waterway.
Foreshore and waterways scenic quality	The proposed development is located a sufficient distance from the foreshore and its waterways to ensure it will have no impact upon its scenic qualities.
Maintenance, protection and enhancement of views	A Visual Impact Analysis was prepared for the SICEEP project and submitted with the Concept Proposal for The Haymarket. This analysis examined the impact (including cumulative impacts) of the proposed development upon views to and from Sydney Harbour, public places, landmarks and heritage items is considered to be acceptable. Updated photomontages including the detailed design of the North West Plot are included and discussed in Section 5.5 below. The proposal will not adversely impact upon public domain views, and will enhance views within the new public domain areas within The Haymarket by demolishing the SEC Car Park and providing active uses which contribute to the vitality of these spaces.
Boat storage facilities	Boat storage facilities are not proposed as part of the proposed development.
Clause 59 - development in the vicinity of heritage items.	Heritage is addressed at Section 5.11 of this EIS and at Appendix D .

5.4.3 Darling Harbour Development Plan No.1

The Darling Harbour Development Plan No.1 (DHDP) is the principal planning instrument applicable to the SICEEP Site, and more specifically the North-West Plot within The Haymarket Site. It provides a broad framework for development, principally through identifying permissible uses.

The objectives of the DHDP are to encourage the development of a variety of tourist, educational, recreational, entertainment, cultural and commercial facilities, and to set out those uses which are deemed permissible.

The proposed development is consistent with these objectives as part of the SICEEP redevelopment project. The SICEEP redevelopment will deliver new world class convention, exhibition and entertainment facilities, and will re-position Sydney as the major events and business venue in the Asia-Pacific region. The proposed development is a key component of SICEEP Project and will contribute to a new vibrant neighbourhood.

A summary of the permissibility of the uses proposed in this SSSDA (including potential future land uses) is provided in **Table 11** below.

Table 11 – Permissibility of land uses (including possible future land uses)

Component	Darling Harbour Development Plan No 1	Permissible?
Demolition	<ul style="list-style-type: none"> Clause 8 of DHDP - the renovation or demolition of a building or work may not be carried out except with a permit being obtained as a permissible use. 	Yes
Commercial Building	<ul style="list-style-type: none"> Clause 6 (d) of DHDP - Schedule 1 includes 'commercial premises' as a permissible use. 	Yes
Television Studio	<ul style="list-style-type: none"> Clause 6 (d) of DHDP – Schedule 1 includes 'film, television and radio studios' as a permissible use. 	Yes
Public domain improvements	<ul style="list-style-type: none"> Clause 6 (a) of DHDP includes development for the purposes of recreational facilities as a permissible use. Clause 6 (c) of DHDP includes development for the purposes of beautifying the landscape as a permissible use. Clause 6 (d) of DHDP – Schedule 1 includes 'parks and gardens' as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use. 	Yes
Retail premises	<ul style="list-style-type: none"> Clause 6 (d) of DHDP – Schedule 1 includes 'art galleries', 'child care centres', 'commercial premises (other than premises used for pawn broking or other forms of moneylending)', 'professional consulting rooms', 'recreation facilities', 'refreshment rooms', 'shops', and 'theatre restaurants' as permissible uses. 	Yes
Remediation	<ul style="list-style-type: none"> Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use. In any event SEPP 55 provides for remediation works to be permissible. 	Yes
Car parking	<ul style="list-style-type: none"> Clause 6 (d) of DHDP – Schedule 1 includes 'car parking stations' as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use. 	Yes
Signage e.g. wayfinding, building identification, event signage	<ul style="list-style-type: none"> Clause 6 (a) of DHDP includes development for the purposes of tourist, educational, recreational, entertainment, cultural facilities or commercial facilities as a permissible use. 	Yes

Component	Darling Harbour Development Plan No 1	Permissible?
	<ul style="list-style-type: none"> Clause 6 (c) of DHDP includes development for the purposes of beautifying the landscape as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use. 	
Extension/ Augmentation of infrastructure	<ul style="list-style-type: none"> Clause 6 (d) of DHDP – Schedule 1 includes ‘public utility undertakings’ and ‘utility installation’ as a permissible use. Clause 6 (e) of DHDP includes development for any purpose incidental or subsidiary to permitted development as a permissible use. 	Yes

5.5 Consistency with Stage 1 State Significant Development Application (SSD 13_5878)

5.5.1 Built Form and Land Use

SSDA4 has been designed to be consistent with the Concept Proposal (SSDA2) currently under assessment by the Department. The proposed development's consistency with key development parameters of the Concept Proposal is demonstrated in **Table 8**.

Table 12 – Consistency with SSDA2

Component	Concept Proposal	Proposed Development	Consistent
Land Use	Mixed Use Commercial and Public Car Park	Mixed use commercial office and ground-level active uses with public car park	✓
Height	Maximum RL 53.60	Maximum RL51.250	✓ Subject to minor amendment of NW Plot envelope under SSDA2
Building footprint	Maximum 82m x 70m	Maximum 81m x 56m	
Building separation	Minimum 20 metres (to Northern Plot)	Min. 20 metres (subject to Northern Plot design)	✓
	Minimum 8 metres (to South West Plot)	8 metres	✓

In addition to the above key development parameters, SSDA4 is generally within the maximum envelope illustrated in the Concept Proposal (SSDA2) with the exception of small protrusion at roof level associated with plant. This minor protrusion is not inconsistent with the Concept Proposal, however, it is intended amend the Concept Proposal building envelope such that SSDA4 will be wholly consistent with the Concept Proposal. Regardless, it is noted that the majority of the building sits well within the building envelope, and the volume of the building is substantially less than that permitted under the SSDA2 Concept Proposal.

The relationship between proposed development and the Concept Proposal parameter envelope is illustrated in the Design Report at **Appendix I**, refer also **Figure 25**.

Further and as envisaged under the Concept Proposal, the proposed building includes architectural detailing and expression within the 500mm vertical articulation zone.

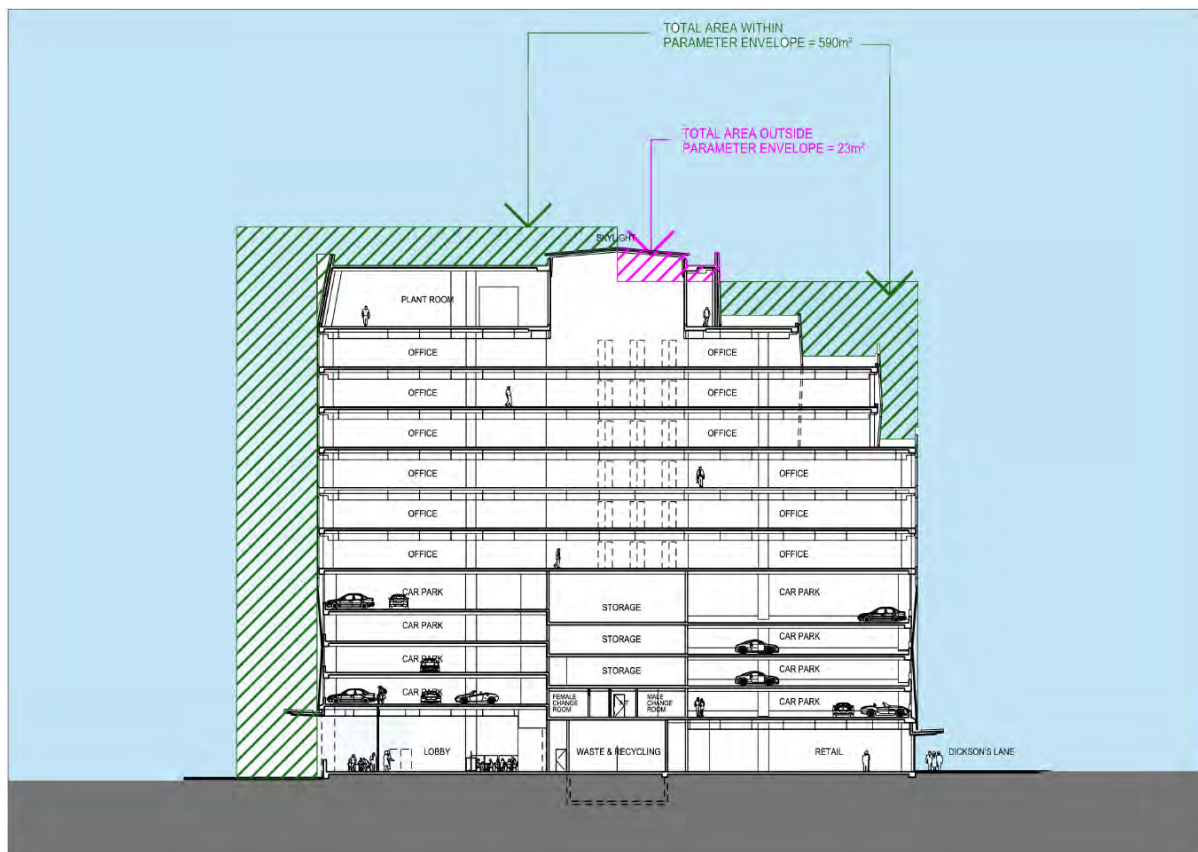


Figure 25 –Comparison of SSDA4 detailed building design to SSDA2 Concept Proposal building envelope

5.5.2 Design Guidelines

Denton Corker Marshall (DCM) has prepared a set of Design Guidelines for The Haymarket. These guidelines have been submitted with the Concept Proposal (SSDA2) and have the key function of informing subsequent building design development within the staged delivery of the precinct (including this SSDA). The consistent application of these guidelines will ensure that future development in The Haymarket is of a high quality with integrated urban design and a mutually successful outcome.

The proposal's consistency with the Design Guidelines is demonstrated in detail in the Design Report prepared by Lend Lease Design (**Appendix I**).

5.5.3 Public Domain

The Concept Proposal (SSDA2) establishes a general public domain concept across The Haymarket precinct. Under the Concept Proposal the area to the south of the North West Plot is identified as Dickson's Lane, a new east-west pedestrian laneway for which approval is sought under SSDA5. A component (northern portion) of this lane has been provided under SSDA4 in accordance with the Concept Proposal.

Approval is sought for substantial public domain and streetscape upgrades along the re-aligned Darling Drive immediately to the east of the North West Plot under SSDA3.

The other aspects of the proposed public domain, paving treatment surrounding the proposed and provision of a feature tree near the main building entry and forecourt for which approval is sought under SSDA4 are all consistent with the Concept Proposal. A detailed analysis of the proposal's compliance with the relevant public domain considerations in the Concept Proposal Design Guidelines has been prepared by Hassell and is provided at **Appendix I**.

5.6 Design Excellence

Context

The achievement of design excellence for the redevelopment of the SICEEP Site has been an important theme since the project's genesis and inception, and is clearly linked to the Project Vision set by the NSW Government (i.e. delivering world-class convention, exhibition and entertainment facilities and reaffirming Darling Harbour as Australia's premier gathering place).

More specifically, one of the NSW Government's objectives for the SICEEP Project in fulfilling the vision includes *'demonstrate excellence in design and environmental sustainability'*.

A mix of techniques are being utilised to create design excellence. The Government intent is to ensure a 'Precinct Outcome' whereby design forms an integral component of the consortium. A 'master plan' was required as the overarching document, guiding all aspects of the proposal. Through development of the master plan within the consortium team, the competing interests of urban design, facility functionality, operational logistics and commercial realities were balanced. Further using a number of acclaimed architects will create architectural diversity.

Design Review Panel

As an initial step in ensuring design excellence is delivered, INSW established and appointed a Design Review Panel (DRP). The DRP is chaired by the Government Architect and includes the following membership:

- Peter Poulet (NSW Government Architect);
- Yvonne von Hartel AM – (Founding Principal of peckvonhartel); and
- Kim Crestani (Principal Manager, TfNSW).

In addition to the formal appointment of members to the DRP, there are also observers involved including Graham Jahn AM (Director, City Planning, Development & Transport at the City of Sydney) and Helen Lochhead (Director, Strategic Developments at Sydney Harbour Foreshore Authority).

The Terms of Reference (TOR) established by INSW for the DRP were:

1. Provision of advice on proposed architectural and urban design guidelines.
2. Review of proponent concepts during the tender development phase.
3. Provision of advice to Infrastructure NSW regarding design submissions.
4. Review of design development documentation for the preferred proponent.
5. Provision of specialist design advice as required by Infrastructure NSW.

As evident from the TOR, the DRP has and will continue to play a crucial role in championing design excellence for the SICEEP Project. Further to the early meetings held to discuss the initial concept for the proposal, the detailed design of the proposed architectural scheme for the North-West Plot was presented on 19 April 2013. Notes from the meeting are attached at **Appendix S**.

At this meeting, the DRP were generally supportive of the proposal and did not raise any concerns with the proposed building. In particular the DRP recommended the exploration of colour in building facades and the consideration of the use of solar photovoltaic (PV) cells on the roof of the commercial building. Coloured elements have been incorporated within the building façade as demonstrated in the Architectural Design Report and Drawings provided at **Appendix I**. PV cells panels have not been incorporated at this stage, however the proposed roof design does not prevent their installation at a later date.

Urban Design Guidelines

Woods Bagot was engaged by INSW to prepare Urban Design and Public Realm Guidelines (Urban Design Guidelines) for the SICEEP Project, which provided a framework for the realisation of the Project Vision.

These Guidelines formed an important starting point and basis for the design concepts and Master Plans of the shortlisted consortia Darling Harbour Live (formerly known as 'Destination Sydney') and VeNuSW. Key design excellence principles set out within the Urban Design and Public Realm Guidelines include:

- Creating new connections in the east-west and north-south direction and helping to knit the city fabric together;
- Using appropriate building height, alignment, form, grain and massing;
- Using appropriate materials suited to the local area palette;
- Responding to the adjacent items of heritage significance through the design of alignments, proportions, and solid to void ratios;
- Preserving significant view corridors;
- Minimising loss of solar access to the public domain;
- Preventing loss of privacy by overlooking of adjacent properties;
- Providing a new landmark for Darling Harbour, increasing the visual presence of facilities in the City and enriching the composition of the city skyline;
- Presenting a new face to the city, one that engages with people at street level and that enhances quality of the street life;
- Providing a constant presence of events both day and night which will create a critical mass and be responsive to the current and emerging city fabric; and
- Providing signature spaces that are open to the parklands and Darling Harbour and in the process showcasing the City and making it an integral part of the convention experience.

Selection of the Preferred Proponent

Design was a major component of the evaluation process undertaken by the NSW Government in selecting the preferred proponent. The overall RFP and selection process of the preferred proponent in this regard closely mirrored a City of Sydney Council 'invited' competitive design alternatives process. For example:

- Two shortlisted consortia were selected and invited to submit a proposal/design and compete for the role of preferred proponent;
- A project brief was issued to each consortia by INSW on which to formulate and base its proposal, including setting out evaluation criteria;
- Each consortium was given a set timeframe in which to prepare and submit their proposals;
- After submission, each consortium was given the opportunity to present their proposal to INSW; and

- An Evaluation Panel (jury) was appointed by INSW to assess, evaluate and recommend the nomination of a successful proponent.

Underpinning each of the shortlisted consortium's bids for the SICEEP Project were both renowned international and Australian design, architectural and landscape firms (all of which have demonstrated design excellence ability):

Given the importance of design in selecting the preferred proponent, the involvement of the DRP and with two high calibre design teams competing against one another in multi architect/designer terms, the realisation of achieving design excellence in delivering the SICEEP Project by the Preferred Proponent has been assured.

Detail Design Development of the Darling Harbour Live Master Plan

Design excellence in implementing the Darling Harbour Live Preferred Master Plan will be achieved through:

- Retaining an internationally and Australian renowned design team which is recognised for design innovation and excellence throughout the delivery of the project;
- Continuing regular and collaborative meetings with the DRP in the ongoing design and refinement of future DAs for which planning approval will be sought (refer to **Appendix N** for details of meetings held with the DRP in relation to this SSD DA);
- Utilising a variety of architects in delivering the detailed design for future buildings and public/private realm within the Concept Proposal, for instance the use of Lend Lease Design in this instance; and
- Utilising the Darling Harbour Live consortium's skills and proven track record to deliver world class convention, exhibition and entertainment facilities, a high quality, expanded and re-invigorated public domain, and a new neighbourhood with a vibrant and exciting mix of commercial, residential, and retail uses.

5.7 Built Form and Urban Design

5.7.1 Built Form

The Concept Proposal for The Haymarket (SSDA2) currently under assessment by the Department establishes the built form parameters for the proposed development, including building height and footprint. As set out in **Section 5.4** the proposal is generally consistent with the Concept Proposal (SSDA2), with only minor variations proposed at roof level. These minor variations are intended to be reflected within the Concept Proposal by amending that proposal such that SSDA4 will be wholly consistent with the Concept Proposal.

The general design intent is to generate an architecture which addresses the multi-use functions within while importantly and appropriately, veiling and articulating the above grade multi-storey car park to create an interesting and vibrant facade that integrates with the precinct. Overland water flow and management considerations for regular and extreme weather events have also contributed to the various ground level conditions to which the building responds. Segregated vehicular access, responding to the provision of Theatre Road and a demarcation of building address have further contributed to the proposed configuration and location of these functions. In the effort to address these areas and challenges, the objective and aspiration is to ensure the public realm activation and articulation of a scaled and civic ground plane remains paramount.

As illustrated in the indicative photomontages in **Figures 26, 27 and 28**, the proposed building has been designed to achieve a high level of articulation whilst also incorporating high quality and diverse façade treatments to provide interest and diversity. This design has been developed with strong architectural input through the design excellence process detailed in **Section 5.6** above.

The stepped building height will provide for a more diverse and lower scale urban form towards Haymarket Square and allow for improved afternoon sunlight to this central public domain area. The stepped setbacks respond to the prescribed parameter planning envelope controls for the site and also acknowledge the residential uses to the south. This design scheme also exaggerates the scale of the northern commercial office element, providing an appropriate landmark feature at the transition between The Haymarket and The Theatre and drawing attention away from the Pier Street viaduct and towards the built form.



Figure 26 – Indicative view to the North West Plot from 'The Boulevard' looking north-west



Figure 27 – Indicative view towards North West Plot from Pier Street viaduct to the west

5.7.2 Urban Design

The proposal's consistency with the Design Guidelines ensures that a high quality of urban design is achieved not only in regards to the form of the proposed development, but also in the surrounding public domain. The proposal provides for a high quality built form with an appropriately high standard of architectural treatments and finishes commensurate with the building's prominent role at the north-west corner of The Haymarket Square and at the northern entrance from Darling Harbour.

The urban design framework for the North West Plot seeks to:

- Acknowledge the highly visible vehicular approach from Pier Street and the relation to The Theatre to the north.
- Create a strong visual address leading statement related to sightlines from (elevated) Pier Street and the associated off-ramp.
- Offer a notable and recognisable visual/pedestrian address/front-door statement as observed from the new "Boulevard" when approaching The Haymarket from the main ICC facilities and the central public spaces within the overall precinct plan area.
- Create an animated and visually compelling south façade and roofscape (adjacent Dickson's Lane) to appropriately and enlighten the presentation of the car parking levels and office levels to the residential uses opposite.
- To delight and animate the diversity of ground level functions with a contextually referenced palette of colour and materiality to create a diverse and visually enticing ground plane.

Figure 28 illustrates the relationship of the North West Plot building to The Boulevard and future development to the south.



Figure 28 – Indicative view to the North West Plot from ‘The Boulevard’ looking south-west

5.7.3 Overshadowing

Virtual Ideas have prepared shadow diagrams of the proposed development, taking into account the future development across the entire SICEEP site and also the current development within central Sydney (see **Appendix T**). These diagrams illustrate hourly the shadow cast by the proposed North West Plot building from 9:00am-5:00pm on 21 December, 21 March and 21 September, and 9:00am-4:00pm on 21 June.

Shadows cast by the proposed mixed use commercial building within the North West Plot are within those cast by the building envelope sought under the Concept Proposal (SSDA4). The cumulative impact of The Haymarket and individual building envelopes was assessed in the EIS for the Concept Proposal, noting that the impacts of overshadowing would be minor and generally comply with the requirements of the City of Sydney Development Control Plan 2012.

The detailed design of the proposed building, and in particular the setback of the commercial office levels, provides for a significant reduction in the overall shadow cast by the North West Plot between 11am and 5pm during the spring and autumnal equinox. During this period of time the additional building setback improves solar access to Dickson Lane, the South West Plot and Haymarket Square.

Shadow diagrams have also been prepared showing the shadow impact of the proposed development on buildings in the vicinity of Hay Street to the south. These diagrams demonstrate that the development of the North West Plot will have minimal impact on public domain and buildings to the south of the site. Shadows cast outside of The Haymarket Precinct by the North West Plot development are limited to late afternoon on the winter solstice and are well within the extent of shadows cast by building envelopes for the SE and SW Plots sought under the Concept Proposal. The proposed amendments to the height and roof levels within the stepped envelope have no impact on shadows cast by the proposed building.

In light of the above, it is considered that the shadow resulting from the proposed building is acceptable and will not result in any adverse environmental impacts.

5.8 Visual and View Impact

A Visual and View Impact Analysis has been prepared by JBA in support of SSDA4 and is included at **Appendix U**. This analysis builds on and provides further detail on the 'overarching' Visual and View Impact Analysis prepared and submitted in support of the Concept Proposal (SSDA2).

To support the visual analysis key public domain views, view corridors and public vantage points within and surrounding the SSDA 4 Site have been identified. Photomontages have been prepared for a total of 14 public domain views and vantage points in the following general locations (refer to **Figure 29**):

- King Street Wharf;
- Pyrmont Bridge;
- Tumbalong Park;
- Pier Street;
- Macarthur Street;
- Darling Drive (including The Goods Line and Uts Corner);
- Hay street;
- Little Hay Street; and
- Quay Street corridor

Of those seven key buildings in the vicinity of the SICEEP Site identified as being impacted or potentially impacted on by the overall SICEEP Project in terms of private views (refer to **Figure 30**), there are only two (2) which require further assessment and consideration in relation to the subject SSDA being the Peak Apartments and The Quay (under construction).

With the proposal being wholly contained (and in some places substantially) within the building envelope proposed under SSDA2, the conclusions reached within the overarching View and Visual Impact Analysis remain valid. The consideration of potential visual and view impacts associated with the proposal should be read in conjunction with the SSDA2 Visual and View Impact Analysis submitted in support of SSDA2.

Visual Impacts

- Existing important views from the public domain at street level to the most significant and highly utilised public domain spaces within and in close proximity to the Site to be retained;
- Existing public domain views to key heritage buildings and places are retained or unaffected by the proposal including to the Darling Harbour Water Feature, Chinese Garden of Friendship, and Pumping station No.1 in the southern part of the Site;
- Visual connectivity to other heritage items in the vicinity is not generally affected by the proposed new built form;
- The proposed new building will frame existing public domain views and enclose street adjoining creating a pedestrian scale. It will also contribute to a new southern CBD skyline and redefine the skyline on the western side of Darling Harbour;

- Continuous and unobstructed sightlines to the foreshore are maintained to the public, and views to, through and over the Site are retained such that the public / pedestrians will continue to enjoy the visual qualities of the harbour and its foreshores. The principle east west public domain view corridors providing both physical and visual access to the foreshore are retained; and
- The continuation of existing streets into and through the SICEEP Site (eg Hay Street, Little Hay Street, Quay Street, Quarry Street etc) establishing new sightlines, visual permeability and views and vistas throughout the precinct are unaffected by the proposal.

Where the proposed building does encroach within or reduce partial existing public domain views towards the Sydney CBD skyline, these impacts are considered to be minor. It will not detract from the overall visual connectivity for pedestrians in the public domain nor result in any significant adverse impact.

Generally, the affected vantage points are not key places for pedestrians to stop and view the CBD or its skyline, and the wide range of different viewing points available within the Darling Harbour precinct and its approaches will continue to provide for variety and interest in the different views, vistas and sightlines available to pedestrians approaching and moving through the precinct from the north, south, east and west.

Low, medium and high level views of the sky along streets and from public domain places (squares, parks etc.) are retained, created or enhanced in a variety of contexts. The siting and design of the new building has sought to preserve important views of the Sydney CBD from encroachment and to both maintain and open up significant views from the public domain.

View Impacts

With respect to private views:

- The siting and design of the building has sought to respond to view sharing principles and to provide for an appropriate outlook from adjoining private development as practicable in a highly urbanised inner city environment;
- The impacts associated with the proposed development are considered to continue to provide for a reasonable 'outlook' from apartments that may nonetheless have a change in 'view', consistent with current planning objectives, strategies, principles and development controls for the CBD which recognise that outlook, as distinct from views, is the appropriate measure of residential amenity within a global CBD context. Outlook is retained from all affected apartments with an appropriate distance separation between towers and with space / daylight provided between the proposed new built form elements;
- There will be a reduction in some views available from, in particular, the lower and middle levels of The Peak when looking towards the north westerly horizon. This results from the creation of an entirely new urban precinct in The Haymarket where there are only currently low rise buildings in existence. The interruption of existing private views/outlook that are currently unimpeded by any development is inevitable in the context of an urban renewal project and is not unreasonable having regard to the highly urbanised global CBD environment of Sydney within which the land is situated. Notwithstanding, the proposed commercial office and public car park development has a relatively minor impact on existing views and has accommodated view sharing between and above buildings, and has sought to retain a combination of water, horizon and CBD skyline views. It is considered that the development provides for view sharing as appropriate in an highly urbanised CBD location.

It is considered that the proposed development has achieved a reasonable balance between the protection of private views and the protection of public domain views in the delivery of a new world class entertainment precinct on the foreshore of Darling Harbour.

The detailed design of the building within The Haymarket concept proposal envelope has sought to provide for view sharing, having regard to the detailed design guidelines that have been proposed as part of the concept. The maximum envelope has not been filled.

The development proposed is acceptable in terms of visual and view impacts.



Figure 29 – Visual analysis – photomontage locations



Figure 30 – Key buildings (private views)

5.9 Transport and Accessibility

A Transport and Traffic Impact Assessment has been prepared by Hyder to determine the potential impacts of the proposed development on the existing transport network (**Appendix V**) within the framework of the transport and traffic modelling undertaken to support SSDA2. The key components of the Transport and Traffic Impact Assessment are outlined below.

5.9.1 Car Parking

A total of 400 public car parking spaces and 50 commercial tenant spaces are proposed to be provided within the mixed use commercial office building.

The proposed provision of 50 spaces for commercial tenants is significantly below the *RMS Guide to Traffic Generating Development* requirement of 200 spaces but is considered appropriate given the CBD location of the site, the proximity to all modes of public transport and the expectations of CBD tenants. The proposed tenant parking provision is within the maximum parking provision of 83 spaces specified under the City of Sydney DCP 2012.

The provision of 400 spaces within the North West Plot public car park has been specified by INSW as the minimum provision (in addition to those spaces within the SSDA1 site) required to support the operations of the SICEEP core facilities and surrounding venues such as the Powerhouse Museum.

Accessible parking within both the commercial tenant allotment and the public car park will be provided in accordance with the required rates.

In light of the above it is considered that the proposed parking provision is appropriate given the location of the site and the predicted parking demand for the SICEEP precinct.

5.9.2 Access

The location of the vehicular access point to the proposed building ensures that vehicular movements and the associated potential for noise, pedestrian conflict and air emissions has the least impact upon the surrounding public domain and land uses. This location allows the key pedestrian interfaces with the building (Dicksons Lane and The Boulevard) to be activated and ensure that in these spaces pedestrian movements are unimpeded.

Vehicular ingress and egress from the car park and loading dock will be from Exhibition Place, which is being reconfigured as a one-way street with traffic flows in a clockwise direction exiting to Darling Drive immediately to the west of the North West Plot.

Drop-off points will be provided on the southern side of Exhibition Place immediately to the north of the proposed commercial office lobby at ground level to accommodate four vehicles. In addition three new additional drop-off spaces will be provided within Exhibition Place adjacent to the SHFA operations centre. Amendments to the loop road will be progressed through the Response to Submissions for SSDA1.

5.9.3 Traffic Generation

Existing Traffic Conditions

Hyder have documented the existing conditions along Darling Drive and at relevant intersections in the vicinity of the proposed development. On Darling Drive it is noted that during the PM peak approximately 900 vehicles travel in a southbound direction whilst 400 vehicles travel in a northbound direction.

The peak period in the local traffic network has been identified as the Friday and Saturday PM period. An analysis of existing intersections at this time has concluded that all intersections perform at an acceptable level of service.

Anticipated Traffic Generation

Trip generation rates for the public car park have been calculated by Hyder on the basis of the maximum capacity of the public car park, whilst rates associated with the commercial tenant spaces have been calculated based on RMS guidelines. The operation of the public car park will correspond with the peak operations of the SICEEP core facilities and surrounding venues, and as such is likely to correspond with the Friday and Saturday peak periods within the local road network. However, trip generation associated with the public car park is anticipated to replace traffic already associated with the SEC car park and as such is not anticipated to contribute to additional network loads.

Based on the existing intersection performance and the likely traffic to be generated from the proposed development and the broader SICEEP precinct, all key intersections identified by Hyder will perform at an acceptable level of service. Vehicles exiting the proposed car park will experience average delays in excess of 60 seconds during peak periods due to the deliberate prioritisation of vehicular movements along Darling Drive. These delays are considered appropriate and acceptable and are generally commensurate with the existing delays experienced by patrons of the SEC car park.

Hyder has also confirmed that the proposed rationalisation of Darling Drive to a single northbound lane and two southbound lanes will be capable of holding the current traffic levels and future traffic expected to result from the proposed PPP redevelopment (SSDA1).

In light of the above it is considered that the proposed development of the North West Plot will not result in any significant adverse impacts upon the operation of the local road network.

5.9.4 Construction Traffic

Hyder has reviewed the Construction Management Plan prepared by Lend Lease (**Appendix O**) and calculated the predicted construction traffic associated with the proposed development to be in the order of 3-4 trucks per hour with variation depending on the stage in the construction program, and considers the impact of this traffic to be acceptable.

5.10 Water Cycle Management

A Flooding, Stormwater and WSUD Report has been prepared by Hyder Consulting for SSDA4 (**Appendix L**).

5.10.1 Flooding and Stormwater

Under existing site conditions, a number of overland flow paths from within the upper catchment converge along Hay Street and are directed northward through the site. The current stormwater management system for the precinct relies on a number of large culverts for stormwater detention and disposal, however these culverts do not have sufficient capacity to accommodate flows including and above the 100-year ARI event.

The development of the North West Plot will impede some of existing overland flows and involves the development of a new building above an existing Sydney Water stormwater culvert. This culvert will continue to function within the overall precinct flood mitigation strategy. Detailed stormwater and drainage designs are included within the Flooding, Stormwater and WSUD Report (**Appendix L**).

Despite the proposed methods, areas of the public domain (outside of SSDA4 site) will continue to be required to facilitate overland stormwater flows during periods of heavy rainfall. Internal finished floor levels within ground level tenancies (RL 3.5 AHD) are above the current 100-year ARI flood level (RL 3.2 AHD) but below the probably maximum flood event (PMF) level (RL 4.4 AHD). Flood levels are highest at the south-west corner of the North West Plot, with flood levels being between 400mm and 600mm lower at the north-east and south-east corners of the site respectively. Sea level rise associated with climate change will increase the maximum 100-year ARI flood level experienced within the site from RL 3.2 AHD to RL 3.4 AHD but will not impact upon the maximum PMF flood level. Finished floor levels will be entirely above post-development flood levels up to and including the 100-year ARI event. However, during the post-development PMF event flood levels may be up to 1.0m above the proposed finished floor levels.

In light of the above, additional flood protection options at the Ground Level for peak flood events have been investigated and are detailed in the Flood Protection Advice prepared by Flooding Solutions Advisory Group and provided at **Appendix I**. These measures include:

- Bi-fold hinged floodgates in front of shopfront entrances and openings;
- Pop-up blade flood barriers which rise from within masonry; and
- Steel-framed, structurally anchored, impact resistant floor windows.

These potential solutions have been identified as they present the ability to provide a fully integrated flood barrier in ground level tenancy façades and are able to be quickly (permanent or enacted within 60 seconds) and easily (by tenancy staff) implemented to seal ground level tenancies against flooding without adversely impacting upon the ability to provide active uses within these tenancies. Detailed design of ground-level tenancies will incorporate an appropriate mix of the above measures and this is required by the mitigation measures listed at **Section 6.0** of this EIS.

In light of the above it is considered that the proposed development is capable of incorporating appropriate flood mitigation and prevention measures at the detailed design stage. The measures are capable of mitigating potential flood impacts up to and including the PMF event and account for potential sea level rise associated with climate change.

5.10.2 Water Quality

The proposed development incorporates water sensitive urban design (WSUD) measures to reduce potable water consumption, minimise wastewater generation and treat urban stormwater. Stormwater from the building roof areas will be captured within integrated rainwater storage tanks for reuse in toilet flushing and landscape irrigation, thereby avoiding direct discharge of water from these surfaces from the site. These measures will ensure the achievement of pollution reduction targets for gross pollutants, Total Nitrogen, Total Suspended Solids and Total Phosphorous in accordance with the City of Sydney DCP 2012.

Stormwater quality during the construction phase will be safeguarded through the implementation of measures detailed in the Erosion and Sediment Control Plan included within the Civil Infrastructure Drawings prepared by Hyder Consulting (**Appendix J**). These plans have been prepared in accordance with the 'Blue Book' which is considered to be industry best-practice for construction-phase stormwater control.

5.11 Heritage

A Statement of Heritage Impact (SOHI) for the Concept Proposal was prepared by TKD Architects and submitted with the Stage 1 DA. The SOHI assessed the potential impacts on the heritage significance of the Site and heritage items in the vicinity of the Site. The SOHI followed the general guidelines for Statements of Heritage Impact set out in the NSW Heritage Manual and has been prepared in accordance with *'The Conservation Plan'* by Dr J. S. Kerr, the ICOMOS *'Burra Charter'*, and the DGRs.

As the SSDA4 site is located on wholly reclaimed land, the site has no indigenous cultural heritage significance or archaeological potential.

Following the exhibition of the SSDA1 and SSDA2 a number of minor amendments have been made to the SOHI, primarily relating to the following:

- Detailing the history and significance of the existing facilities, and the decision of the Heritage Council not to list the buildings as items of heritage significance;
- Providing additional assessment with regards to the potential impacts of the PPP proposal upon the Darling Harbour Rail Corridor; and
- Providing additional assessment with regards to the potential impacts of the student accommodation upon the Darling Harbour Rail Corridor and the Powerhouse Museum.

These changes have been incorporated into the SOHI provided at **Appendix D**, however they have no bearing upon the assessment of heritage impacts associated with development of the North West Plot.

TKD Architects has prepared a supplementary SOHI relevant to this Stage 2 DA which is included at **Appendix D**. The supplementary SOHI concludes that the proposed development is consistent with the Stage 1 DA and that the assessment of the potential heritage impacts remains unchanged.

A summary of the findings of the Stage 1 SOHI, as relevant to this Stage 2 DA, is provided in the following sections.

5.11.1 Items of Heritage Significance

The Hay Street Stormwater Channel (Hay Lackey Drain) (S170 Register), and the Pier Street Precinct Archaeological Remains (State significance), are the only heritage items identified as being located within the Haymarket Site. Potential impacts to these items are assessed in **Section 5.11.2** below.

The following heritage items are identified as being located within or in the vicinity of the North West Plot:

- Darling Harbour Rail Corridor (S170 Register);
- Powerhouse Museum (local significance); and
- Former Hydraulic Pumping Station No.1 (the Pumphouse) (State significance).

5.11.2 Potential Impacts of the Proposal

The proposed development will result in major changes to the existing built form, and therefore has the potential to impact upon the setting of heritage items within its vicinity. TKD Architects have assessed the potential impacts to specific heritage items as follows:

Former Hydraulic Pumping Station No.1 (The Pumphouse)

The SOHI has assessed the potential impact of the Concept Proposal (particularly the North and North West Plots) on the Former Hydraulic Pumping Station, and determined that the Concept Proposal will result in a similar scale and height relationship between the north plot and the existing built form. The SOHI finds that setting of the heritage item will be enhanced due to widening of the Pumphouse plaza space, which is protected by the development of the North West Plot building.

Darling Harbour Rail Corridor

The SOHI finds there will be some impacts to the Darling Harbour Rail Corridor resulting from the future buildings in the Western Plot (Darling Drive). Development of the North West Plot is situated further to the east of the Rail Corridor, and any visual relationship between the site and the Rail Corridor will be broken by the future development of the Western Plot. On balance, the potential impacts of the proposed North West Plot development are considered negligible and acceptable.

Powerhouse Museum

Development of the North West Plot will be higher than the existing carpark structure and will therefore impact on views to this heritage item from the east. However, it is noted that the effected facade of the Museum is utilitarian, commensurate with its original frontage to the former Darling Harbour Goods Yard, effectively reducing the significance of any impact.

5.11.3 Mitigation Measures

In accordance with the Stage 1 DA, an interpretation Strategy for the entire SICEEP Site is to be prepared in accordance with the NSW Heritage Manual and the OEH's Heritage Interpretation Policy. SHFA's 2008 publication *'Telling the Stories of Darling Harbour'* is an interpretation strategy based on ten distinct themes. Key themes relevant to the North West Plot and potential opportunities for their interpretation are summarised below:

- Gathering Cockles- the first people, and European Settlement.
 - Place in the paving quotes and thoughts describing the original natural landscape.
 - Use installations to showcase the range of traditional lifestyle skills including collecting foods, making tools and raising families.
 - Mark in the paving the outline of the harbour and creek line prior to reclamation.
 - Mark in the paving the Hay Street stone culvert alignment and discuss the loss of natural creek lines and the decline in urban water quality.
- Decline and rebirth – Darling Harbour's transformation from port and industrial area to leisure tourism precinct.
 - Present chronological images showing the transformation from its early colonial natural state to its shipbuilding and wharf period, its peak industrial period and its conversion to a public landscape.

The SOHI recommends that the Interpretation Strategy *'Telling the Stories of Darling Harbour'* should be incorporated into the detailed design of the SICEEP redevelopment, and that the process should include consultation with relevant stakeholders. The interpretation strategy would be complemented by appropriate interpretative devices, as outlined in the Strategy.

5.12 Geotechnical

A Preliminary Geotechnical Assessment has been prepared by Coffey (**Appendix F**) on the basis of existing information that is available for the site (including the SSDA2 Preliminary Geotechnical Assessment), information obtained in relation to adjoining sites and other geological / geotechnical information available.

Based on the results of the preliminary assessment, the geotechnical constraints for the site are associated with the following main subsurface features:

- variable fill in terms of nature and thickness;
- an in-filled palaeochannel incised into the Sandstone bedrock and orientated roughly north/south;
- an igneous dyke intrusion through the sandstone bedrock, striking north west/south east;
- sheared zones and joints in the Sandstone bedrock, associated with the 'GPO' Fault regionally mapped as striking north north east/south south west; and
- high groundwater levels.

Based on the preliminary assessment the development of the site is considered feasible from a geotechnical perspective, with a piled footing design considered the most appropriate measure. The proposed developments should present a low risk to surrounding structures and additional site investigation and design assessments will be undertaken during the detailed design stage.

5.13 Contamination

Human Health and Ecological Risk

A Human Health and Ecological Risk Assessment has been prepared by EnRisk (**Appendix G**) which presents a specific assessment of The Haymarket site of potential risks to human health and identified environmental receptors in the context of the proposed development and existing site conditions.

Based on the results of recent site investigations it is evident that The Haymarket site is subject to widely distributed contamination from polycyclic aromatic hydrocarbons (PAH) and potential and actual acid sulphate soils, with localised hydrocarbon, metal and asbestos contamination hotspots. Contamination within The Haymarket site is generally within the established site criteria, with the exception of two localised areas where levels of benzo(a)pyrene and naphthalene, and asbestos, are considered to be hazardous human health. One of two localised areas is located within the subject SSDA4 development site boundary.

The Human Health and Ecological Risk Assessment prepared by EnRisks (**Appendix G**) considers the potential impact of site contamination on construction workers and occupants of the future development (during Stage 1 and 2 occupation if construction is staged). Based on conservative estimates and existing knowledge of potential site contamination, and the nature of the proposed development, this assessment finds that the potential future health risks to users of the proposed development are low and acceptable. The only exception is the risk posed to employees within ground level non-residential retail and commercial spaces which are above acceptable levels without remedial works (refer to below for details regarding proposed remediation within the subject SSDA4 site).

The Human Health and Ecological Risk Assessment prepared by EnRisks (**Appendix G**) considers the potential impact of site contamination to terrestrial flora within The Haymarket and to marine receptors within Cockle Bay. Based on existing knowledge of site contamination and the condition of existing mature vegetation within The Haymarket, the assessment finds that existing site conditions will have minimal ecological impact to new landscape plantings within the site.

Whilst groundwater concentrations of acenaphthene, arsenic, chromium, copper, lead and zinc exceeded the screening criteria in some samples collected within the site, these exceedances were found to be minor.

Potential leachate from existing fill on the site has been migrating from The Haymarket site to Cockle Bay for over 20 years and there is existing potential for the dilution of groundwater from the site prior to entering the active waterway. The assessment therefore considers the potential ecological risks from site-derived groundwater to Cockle Bay to be low and acceptable.

Remediation

A Site Specific Remedial Action Plan (RAP) has been prepared by Coffey Environments (**Appendix G**) which details the strategy for remediating the two hotspots (one of which is located within the SSDA 4 site) identified in the HHERA, along with establishing protocols for unexpected finds.

As noted within Section 3.0, the proposed development includes remediation works within the subject site (more specifically within the North-West Plot, excluding surrounding public domain).

Coffey considers that if remediation and validation is undertaken in accordance with relevant parts of the RAP (**Appendix G**), then the North-West Plot will be made suitable for the proposed development of that plot.

Coffey confirms that contamination assessment results reported contaminant concentrations, other than that in Area 1, generally below SILs and otherwise below RAC in and around the North-West Plot. On that basis, Coffey concludes that the North-West Plot can be made suitable for the proposed development and future uses through successful implementation of the RAP in relation to the North-West Plot.

Groundwater

Analysis of groundwater samples collected from across the site indicates a pH neutral, brackish to saline environment which is consistent with historical reclamation of the land and with the proximity of the site to Cockle Bay.

In summary, Coffey concludes that groundwater from the site discharging to Cockle Bay is unlikely to detract from the relevant objectives set out within (DEC 2005), and no groundwater contamination, which is considered significant enough to warrant detailed investigation or remediation, has been encountered.

Acid Sulphate Soils

Laboratory field analysis has indicated a high likelihood for the presence of acid sulphate soils within natural soils beneath the water table within the site. An Acid Soils Assessment and Preliminary Management Plan (ASSMP) was prepared by Coffey and included within the Concept Proposal (SSDA2). Whilst excavation and earthworks within the site have been minimised, it is likely that acid sulphate soils will be encountered during the construction period (e.g. during piling). Under the overarching strategy acid sulphate soils will be generally be treated on-site, with an appropriate off-site disposal strategy outlined for instances where on-site treatment is not practical or appropriate.

Mitigation Measures

- Contamination and validation is to be undertaken in accordance with the Site Specific Remedial Action Plan prepared by Coffey dated June 2013; and
- A detailed acid sulphate soils management plan will be prepared generally in accordance with the Acid Soils Assessment and Preliminary Management Plan prepared by Coffey dated 11 March 2013.

5.14 Reflectivity

A Solar Reflectivity Assessment has been prepared by Cermak Petera Petersen (**Appendix W**) which analyses the potential solar glare from the proposed development on pedestrians and motorists. All exterior facade elements will have a reflectivity coefficient of 20% or less, which is consistent with the requirements of the Sydney DCP 2012.

The Solar Reflectivity Assessment considers potential views to proposed building from key motorist routes (Pier Street, The Boulevard/Quay Street, Darling Drive and other locations) and key pedestrian locations (Tumbalong Park, Darling Quarter, Chinese Garden of Friendship). This assessment concludes that on the basis of the proposed materials and glazing, the proposed development will not result in any driver hazards or pedestrian discomfort.

Mitigation Measures

Proposed external glazing and facade materials used within the Site will be consistent with or lower than the solar reflectivity levels identified in the Solar Reflectivity Assessment prepared by Cermak Petera Petersen dated May 2013.

5.15 Wind Impact

A Wind Tunnel Test Report has been prepared by Cermak Peterka Petersen (CPP) for the proposed development and is provided at **Appendix X**. This report has sought to determine the potential impact of the proposal on existing wind conditions, and also in the expected conditions of the cumulative development of the SICEEP site.

Initially CPP have established the relevant wind speed criteria for pedestrian comfort whilst sitting, standing and walking. Following this, two scenarios have been tested in the wind tunnel to determine the wind speed levels around the proposal. Each scenario includes existing surrounding development within a 570 metre radius of the SICEEP site. A discussion of each separate scenario and the respective results is provided below.

Scenario One (Configuration A)

The first scenario is based on the provision of the PPP facilities (currently under assessment in SSDA1) and the proposed mixed use commercial and public car park building, with no other development within The Haymarket precinct. This scenario is designed to test the baseline conditions of the proposed building in isolation.

It was determined by CPP that conditions around the proposed development were generally suitable for pedestrian standing or walking, similar to conditions throughout Sydney.

The windiest conditions were identified at the north west and south east corner due to wind diverting laterally around the proposed building and accelerating around the corners of the building. These locations were rated as suitable for pedestrian walking for able bodied patrons, only slightly exceeding the general distress criterion.

All entries to the proposed mixed use commercial and public car park building complied with the relevant criterion and were identified as suitable for building entry areas. The rooftop areas noted for potential tenant use were found to be windy, with screening measures necessary to reach the desired comfort levels. Due to the nature of the use of these spaces, it has been noted by CPP that patrons will learn to use the space in light of the wind conditions.

Scenario Two (Configuration B)

The second scenario comprised the provision of the PPP facilities as well as the full development of The Haymarket precinct as sought under the Concept Proposal (SSDA2) including the proposed mixed use commercial and public car park building. This scenario illustrates the most likely conditions over the lifetime of the proposal.

The results of scenario two were similar to those in scenario one, with some locations illustrating slightly calmer conditions. A number of locations around the base of the proposed building were identified as calm and suitable for casual pedestrian sitting activities.

CPP have noted that conditions along Darling Drive were windier in scenario two, with winds channelling along Darling Drive. The windiest conditions were identified in the road reserve, which will not largely be used for pedestrian walking. CPP noted that wind conditions along pedestrian access routes on Darling Drive would fall below the distress criteria once the proposed landscaping along Darling Drive reaches maturity.

Wind conditions on the roof and upper level terraces were similar to those in scenario one, and local screening has been recommended by CPP to provide calmer conditions.

Mitigation Measures

The wind conditions in the vicinity of the proposal have been assessed as generally consistent with the relevant comfort criteria. To ensure comfort is maximised and there are no exceedances of the distress criterion, CPP have recommended the following measures:

- Ensure street trees are planted along the eastern side of Darling Drive to enhance pedestrian comfort; and
- Provide screening on the roof and upper level terraces.

5.16 Noise & Vibration

A Noise and Vibration Assessment has been undertaken by Renzo Tonin & Associates (refer to **Appendix Y**). This Assessment has identified and investigated the following potential acoustic and vibration impacts:

- Demolition and construction noise and vibration;
- Operational noise from the proposal; and
- Noise/vibration intrusion from the existing environment on the proposal.

The potentially affected receivers are outlined in Table 1 of the Noise and Vibration Assessment. These include receivers situated around the entire Haymarket precinct as a cumulative assessment of the precinct has been undertaken. Renzo Tonin & Associates note that the nearest residential/hotel receivers of the North West Plot will be future residents of The Haymarket and the Novotel Rockford Hotel.

The existing acoustic environment has been determined using a combination of long-term and short-term noise monitoring, which was undertaken in accordance with the NSW EPA *Industrial Noise Policy* (INP). Based on the background and ambient noise monitoring carried out at the nearest affected residential locations, Renzo Tonin & Associates have developed a set of project specific noise criteria (refer to Table 5 of the Noise and Vibration Assessment).

5.16.1 Construction Noise and Vibration

Renzo Tonin & Associates have examined the indicative construction program for The Haymarket precinct, noting that several development plots are likely to be under construction at the same time (north-west, south-west and western plots). As such, the construction noise and vibration assessment has undertaken a cumulative assessment of the potential works.

It is also noted that whilst the majority of works will be undertaken during the standard constructions hours established on other significant development sites in Sydney (i.e. Barangaroo), a number of larger works will be undertaken outside of these hours. These works are required to be undertaken outside of hours to minimise disturbance to traffic. In instances where these works occur, consultation should be undertaken with the community to ensure that all stakeholders are informed about the construction timetable and the potential noise impacts.

Construction Noise

The relevant construction noise criteria have been established by Renzo Tonin & Associates and are provided in Table 10 of the Noise and Vibration Assessment (**Appendix Y**). A conservative assessment of the predicted noise levels has been undertaken on the basis of existing noise monitoring data, with Table 17 of the Noise and Vibration Assessment (reproduced at **Figure 31** below) illustrating predicted exceedances.

Receiver ID	NML, dB(A)	Predicted L_{Aeq} Noise Levels, dB(A)		
		Demolition	Excavation	Construction
R1 - The Peak	65	69	71	60
R2 - Holiday Inn	67	68	70	58
R3 - Seasons	70	61	63	52
R4 - Novotel Rockford	68	76	77	66
C1 - Market City	70 ¹	70	74	62
C2 - Restaurants on Harbour St	70 ¹	70	73	61
C3 - Pumphouse	70 ¹	81	83	70
C4 - The Powerhouse	45 ²	43	46	33
E1 - UTS	45 ²	54	57	43

Notes:

1. NML applies to external areas
2. NML applies to internal areas

Bold font represents exceedance of Noise Management Level

Bold font represents exceedance of greater than 20dB(A) above the Day period RBL (not applicable to non-residential receivers)

Bold font represents exceedance of greater than 75dB(A)

Figure 31 – Predicted maximum exceedances of construction noise management levels

There will be some exceedances of the established noise management levels (NMLs) during the demolition of the Sydney Entertainment Centre Public Carpark structure. There will be minor exceedances (<5dB(A)) at two residential receivers, whilst more significant impacts will be experienced at the Novotel Rockford, The Pumphouse and the UTS buildings at the corner of Quay Street and Hay Street.

Noise impacts will be most severe during the excavation phase, with exceedances of NMLs at three of the four residential receivers and all commercial and educational receivers. Noise exceedances will be greatest at the two closest receivers – the Novotel Rockford and The Pumphouse – with noise levels up to 9dB(A) and 13dB(A) above the NML respectively. NML exceedances at other sensitive receivers are generally less than 5dB(A). Excavation within the North West Plot is limited to minor works relating to the amplification of the stormwater culverts and as such excavation noise impacts will be limited to be only a short period of the overall construction program. In light of the benefits of undertaking these culvert amplification works to the overall precinct in terms of stormwater and flood management, including benefits to nearby properties, it is considered that these noise impacts are acceptable in the circumstances.

During the main construction period, which represents the longest portion of the overall development program, predicted noise levels will be equal to or within the established noise management levels for all sensitive receivers. Construction noise impacts during the main works period are therefore considered to be acceptable.

Given the proximity and potential for noise impact on adjacent receivers, and in light of these minor exceedances, general recommendations have been provided by Renzo Tonin & Associates. The assessment finds that these recommendations are capable of providing reasonable and acceptable noise reductions for the most affected sensitive receivers.

Mitigation Measures

- Install a construction hoarding taking into account the location of sensitive receivers;
- Locate stationary plant equipment and unloading/loading zones away from sensitive receivers;
- Where feasible and reasonable the demolition process should maintain structures which provide shielding during works;
- Where feasible and reasonable select the quietest and least vibration emitting construction methods and equipment;
- Limit unnecessary use of equipment and simultaneous operation of noisy plant and equipment;
- Switch off equipment not in use for an extended period of time;
- Where feasible and reasonable install alternatives to reversing alarms; and
- Implement the noise management measures outlined in Table 18 of the Noise and Vibration Assessment relating to site management and work practices.

Construction Vibration

The major sources of vibration during construction have been identified, along with the relevant criteria to ensure human comfort levels are not exceeded and no structural damage occurs to surrounding buildings.

Based on the envisaged construction activities, and considering the distance to the vibration sensitive receivers, the potential for adverse vibration impacts on human comfort and the structural stability of surrounding development is considered to be low.

Mitigation Measures

Despite vibration impacts considered unlikely, Renzo Tonin & Associates have provided several recommendations to ensure any unforeseeable impacts are appropriately mitigated and managed. These include:

- Provision of buffer distances from vibration emitting equipment to existing buildings and residential receivers;
- Attended vibration monitoring should be undertaken on relevant equipment so to refine the recommended minimum working distances and provide a site-specific table of minimum working distances;
- Where vibration is found to be excessive, management measures shall be implemented to ensure vibration compliance is achieved. Management measures may include modification of construction methods such as using smaller rock breakers, using alternative processes or establishment of larger minimum working distances;
- Carry out additional vibration monitoring when construction activities are at the nearest point to the nearby sensitive structures. This monitoring may signal to the contractor by way of a buzzer or flashing light, when levels approach/exceed the recommended limits;
- Before, during and after the demolition and construction stages prepare a dilapidation report on the state of the existing buildings sharing the property boundary with the site; and
- A vibration complaints management system be established prior to the commencement of these works.

5.16.2 Operational Noise

The operational noise sources associated with SSDA4 are considered to be:

- Mechanical plant and equipment, including air-conditioners;
- Restaurants, cafes and retail operations within the ground-level active use tenancies;
- Office terraces; and
- Car park and loading dock activity.

Mechanical Plant

A detailed assessment of mechanical plant noise emissions will be undertaken prior to the issue of the relevant Construction Certificate when the final design of plant is selected. Despite this, a qualitative assessment has been undertaken by Renzo Tonin & Associates, with relevant mitigation measures provided for consideration in the selection of plant equipment and their location.

Restaurants, Cafes and Retail Operations

Whilst specific uses, operating hours and tenancy fitout of spaces within the ground-level active uses zone will be subject to future detailed applications, a high-level assessment has been undertaken by Renzo Tonin & Associates. The location of these uses in relation to the nearest sensitive residential receivers (Novotel Rockford) ensures that any noise impacts resulting from the tenancies will be substantially shielded by the future eastern plot, and anticipated noise levels will generally be below existing conditions in Harbour Street.

Office Terraces

Rooftop terrace spaces will only be accessible to, and used by, the commercial office tenants and are not intended for use for functions or large congregations. The use of these spaces is not expected to impact upon the amenity of nearby residential receivers, being those dwellings within the South West Plot.

Car Park and Loading Dock Activities

The location and treatment of any openings for natural ventilation in the southern façade of the public car park levels will be required to have regard to the potential acoustic impacts upon sensitive uses within The Haymarket – particularly residential dwellings within the South West Plot and office spaces within the North West Plot. The internalised loading dock and the location of vehicular access points at the northern building edge will otherwise ensure that key noise generating activities associated with the car park are suitable removed from any sensitive receivers.

Mitigation Measures

To ensure that noise levels (both singularly and cumulatively) comply with the INP, the following measures may be adopted:

- Undertake further acoustic assessment of mechanical plant during the detailed design process;
- procurement of 'quiet' plant;
- strategic positioning of plant away from sensitive neighbouring premises, maximising the intervening shielding between the plant and sensitive neighbouring premises;
- commercially available silencers or acoustic attenuators for air discharge and air intakes of plant;
- acoustically lined and lagged ductwork;
- acoustic screens and barriers between plant and sensitive neighbouring premises; and/or
- partially-enclosed or fully-enclosed acoustic enclosures over plant; and
- mechanical plant shall have their noise specifications and locations checked prior to installation.

5.16.3 Road Traffic Noise

The provisions of the Infrastructure SEPP and the EPA Environmental Criteria for Road Traffic Noise (ECRTN) do not specifically apply to commercial development, however detailed design of the proposed building will ensure that internal design criteria for office amenity can readily be achieved using available acoustic treatments for glazing.

5.17 Sustainable Design

A variety of sustainability initiatives are proposed across The Haymarket precinct and are detailed in the Haymarket Site Wide Sustainability Plan prepared by Lend Lease and submitted with the Concept Proposal (SSDA2). These sustainability measures have been devised to ensure The Haymarket is capable of being developed and operated in a sustainable manner. Specifically in regards to the SSDA4 proposal, the commercial development will be committing to a 5 Star Design and As-Built Green Star rating under the Green Star Office v3 tool. The proposal will also seek to achieve a NABERS base building energy rating of 4.5 stars. Overall the proposal seeks to reduce greenhouse gas emissions by a minimum of 30% and reduce potable water consumption by up to 50%.

The various measures designed to achieve sustainable development are outlined below.

5.17.1 The Haymarket Precinct

- Enhanced connections and public transport links will be provided that will result in the Light Rail Stations being more readily identifiable, making it a more obvious choice for residents and visitors alike;
- An electric car-share scheme is proposed that will reduce the cost of car ownership and will minimise embodied energy by reducing the number of cars on the road. In addition, by providing electric cars carbon emissions and local air pollution can be reduced.
- Passive signage and dynamic information systems and technology will serve to educate residents and visitors about sustainable design, and encourage wider interest in sustainability initiatives.

Further to these general measures, other aspirational measures being investigated for the Site have the potential to provide significant sustainability benefits. These aspirational measures include:

- Recycled water potentially imported from Barangaroo South. This has the potential to result in a significant reduction in water mains use by providing an alternative water source for flushing toilets, washing machines, cooling towers, and irrigation.
- Potential extension of the precinct thermal plant into The Haymarket. This would minimise materials used in providing electrical infrastructure and reduce greenhouse gas emissions.

5.17.2 SSDA4 Site

Specifically in regards to this application, Lend Lease has prepared a Sustainability Report examining the achievement of sustainability objectives and initiatives in the proposed development (see **Appendix M**). This report focuses on the commercial component of the proposal. The key elements of the design which will contribute to the achievement of the sustainability target ratings are explored below.

Building Design and Fitout

To ensure a high quality internal environment within the building and energy efficiency is achieved high performance glazing and appropriate shading elements will be provided. The selection of glazing will ensure natural light is able to penetrate deep within the floor plate, whilst appropriate shadowing elements controls overheating within the building.

The northern façade will be provided with a shade element at the top of each level to ensure that peak cooling load is reduced by limiting direct solar access during high intensity periods. Vertical fins to the eastern and western façade will also contribute to a reduction of the cooling load. Alternatively, no shading devices are proposed on the southern façade to ensure maximum daylight enters the building without increasing cooling loads.

The fitout of the building is proposed to be delivered as an integrated element with the base building, reducing material waste associated with speculative temporary fitouts.

Other important components of creating a good internal environment are addressed in Section 4.7 of the Sustainability Report. These include providing efficient thermal comfort, good air quality, acoustic comfort and appropriate lighting.

Mechanical and Building Systems

Lend Lease have identified that the following mechanical and building systems will be incorporated into the development to contribute to the achievement of the target ratings:

- High efficiency chilled water plant;
- High efficiency motors;
- Fan and pump selections;
- Low temperature variable air volume air distribution;
- Efficient lighting;
- High façade performance;
- Efficient heating/boilers;
- Naturally ventilated car parking; and
- Energy and water metering.

Stormwater Management and Waste Minimisation

The integrated Water Sensitive Urban Design system across the entire SICEEP Site will ensure efficient and sustainable water management practices and infrastructure are provided across the site. In particular, Lend Lease has noted that the 50% target reduction in potable water can be achieved through a conscious selection of efficient fittings and fixtures with low flow rates. The reuse of rainwater for toilet flushing and irrigation will further reduce water use. The recirculation of water used for fire service testing will also contribute to the minimisation of water consumption.

Green Commuter Strategy

The SSDA4 site is located in an optimal location in regards to public transport, enabling emissions from private transport to be minimised. The car parking proposed within SSDA4 is largely for use by the Entertainment Centre, and are not associated with the proposed commercial building. A significant portion of the car parking is sized for small cars only, and a significant number of motorcycle parking spaces have been provided. These initiatives encourage more fuel efficient methods of transport.

Another important factor in the green commuter strategy is the provision of a high number of bicycle parking spaces associated with the proposed commercial building. Visitor bicycle spaces will also be provided at ground level near the main entry, further encouraging the use of more sustainable methods of transport.

Office v3 tool - Green Star Rating

The Green Star rating scheme established by the Green Building Council of Australia has been used to guide the design process and ensure that appropriate initiatives are put in place to achieve the desired ratings and sustainability target. The proponent is targeting a 5 Star rating, which equates to 'Australian Excellence' in sustainable design. Section 5 of the Sustainability Report established the various initiatives to be put in place in the following areas:

- Management;
- Indoor Environmental Quality;
- Energy;
- Transport;
- Water;

- Materials;
- Land Use and Ecology; and
- Emissions.

With the implementation of the initiatives contained within each of these areas it is considered by Lend Lease that the proposal will achieve the target ratings, as well as the target reductions in greenhouse gases and portable water use.

5.18 BCA and Access

Building Code of Australia

A BCA Assessment Report has been prepared by McKenzie Group (refer to **Appendix Z**). The statement concludes that the design is capable of meeting the requirements of the BCA. Where compliance with the Deemed-to-Satisfy provisions of the BCA cannot be achieved, alternative solutions will be developed prior to the issue of a Construction Certificate and these solutions are not deemed to have any significant impacts on the current design.

Access

Morris Goding Accessibility Consulting has prepared an Access Review to ensure that building modules including retail, commercial and car parking areas, building ingress and egress, paths of travel, circulation areas and sanitary facilities comply with the relevant statutory guidelines (refer to **Appendix AA**).

In general, the development has accessible paths of travel that are continuous throughout. The architectural drawings indicate that compliance with statutory requirements relating to site access, common area access, accessible parking and adaptable units can readily be achieved, subject to implementation of the recommendations prior to the issue of a Construction Certificate which may be required as a condition of development consent.

Recommendations detailed in the Access Review have been incorporated into the draft Statements of Commitments at Section 6.0.

5.19 Infrastructure and Utilities

Hyder has examined the location of existing utilities infrastructure in the vicinity of the Site and provided an assessment of the potential impact of the proposal on this existing infrastructure (see **Appendix B**). Hyder has also recommended what extension or augmentation of utilities needs to occur to adequately service the proposed development.

The proposed development is not expected to have any adverse impacts on the existing utilities infrastructure subject to the below mitigation measures being put in place. It is also confirmed that the proposal will be adequately serviced subject to the detailed refinement of utilities extension/augmentation with the relevant utility providers. Refer to **Section 3.9** for further details of utility extension / augmentation.

Mitigation Measures

In light of the location of existing utilities infrastructure over the site and the nature of the proposed development, Hyder have provided the following recommendations to protect the integrity and functioning of the infrastructure:

- Undertake a desk-top investigation of existing services using Dial Before You Dig information and site observations;

- Undertake a site survey to accurately locate existing infrastructure assets where practical;
- Undertake site exploration works where considered necessary to more accurately locate existing infrastructure assets and test for unknown services;
- Continue consultation with utility providers to confirm location of services and to obtain all necessary consents to work in their vicinity;
- Incorporate utility technical and hazard requirements into the design and construction documentation;
- Ensure safe work methods statements and inspection and test plans are prepared by accredited contractors;
- Implement and record pre-start work checklists;
- Conduct workshops with utility providers where diversion of, connection to or construction close to critical assets is required; and
- Ensure field safety inspectors are present during critical works as determined by each utility provider.

As design progresses or as new information becomes available, the above process will be adjusted or supplemented as required to ensure existing infrastructure assets are adequately protected. Ongoing consultation and design development with the relevant utility providers should continue to be undertaken throughout the process.

5.20 Crime and Public Safety

Harris Crime Prevention Services has prepared a Crime Prevention Through Environmental Design (CPTED) Report (refer to **Appendix BB**) to assess key public and private spaces within the Site against the five CPTED principles, namely:

- Principle 1 – Territorial Definition;
- Principle 2 – Access Control;
- Principle 3 – Natural Surveillance;
- Principle 4 – Activity Support; and
- Principle 5 – Target Hardening.

Harris Crime Prevention Services conclude that the public domain design accords with the DGRs, as the CPTED principles have been considered and applied. The development will result in significant increase in activity generation within and around the Site, which will in-turn increase safety and security for tenants, employees, clients, customers, contractors and visitors. The ways in which these principles will be applied to the public domain design of the Site are summarised below.

Notwithstanding this, the application of CPTED should ultimately extend to the Plot's entire external and internal architecture, which will be addressed during the detailed design stage.

The Plot's Perimeter Approaches

The drawings indicate definitional clarity with regard to ground level entry and activity type, for example the retail, studio, cafe and commercial (lobby) spaces, car parking and loading dock entry. The building footprint has appropriate setbacks from each of the connector (feeder) streets which will enhance approach clarity. Approach clarity also defines access place and purpose, whilst the design intent at each point is clear and directional, the detailed design development will enhance these principles through lighting and signage.

The footprint also indicates potential gathering spaces, subject to detailed landscaping and lighting plans. Harris Crime Prevention Services note that all public domain landscaping will engage with building forecourts and pedestrian entry statements. As a result, landscaping of gathering and meeting spaces will define activity generation and legitimacy for these spaces, and will enhance building approach and perimeter surveillance.

Boundary Spaces External to Building Facades

The building's north-west and south-west corners define vehicle access and egress, including bicycle entry. Whilst these points do not pose any concern, there is an area of vulnerability along the western boundary which will require appropriate low level landscaping, lighting and CCTV (or IP Networked) treatment to reduce or prevent opportunities for 'loitering with intent'. Notwithstanding this, it is noted that some roadway observation of the western edge will be possible from Darling Drive and pedestrian volumes along Dickson's Lane and the Theatre Access Road.

In addition, whilst outdoor retail activity along the southern boundary will provide passive surveillance for cyclists using the storage area, where surveillance is not possible from reduced activity (for example late at night or during winter or wet conditions) CCTV surveillance should be considered.

The report notes that the drawings define loading, commercial and public car parking entry points appropriately. Notwithstanding this, they are essentially back-of-house areas which, as for the cycle entry, will require appropriate lighting and technical surveillance treatment including graduated ramp lighting, and the appropriate design of access doors / gates and security or emergency 'help' points. Passive surveillance of these areas will also be intermittent, and so CCTV coverage will be required, especially along the Plot's western boundary.

The least vulnerable spaces are the southern and eastern boundaries, which will have retail, commercial, gathering, traversing and main entry activity generators. Natural surveillance will be encouraged through casual visitor usage, from retail staff and from commercial tenants occupying and accessing the building at regular basis during the day and night.

The Undercroft, Commercial and Car Park Lobbies

The Plot's undercroft creates the main entry statement, providing a stepped plaza fronting The Boulevard and the Theatre Access Road. This (sub) precinct is a major activity generator, with high legibility both to and from the plaza due to its obvious definition-of-purpose and its visibility along a significant section of The Boulevard. From a crime prevention perspective, the space promotes a high visibility 'safe place'.

Further, the intentional 'stay' architecture, including the location and design of outdoor furniture, will maximise casual surveillance from the cafe and other retail and activities. The studio and / or additional retail space will increase surveillance options. To further enhance user safety, landscaping design development should feature low level plantings to capitalise on the multi-angled surveillance sight lines.

Finally, the lobby entry zones to the commercial and public car park are appropriately located with no recessed doorways. Design development will engage appropriate lighting and furniture design to enhance night time lobby entry security.

Outdoor Retail

The mixed retail zone provides a linear break between Dickson's Lane and the Plot's southern boundary. An additional break captures the north façade of the South West Plot, connecting with the retail intent of both Plots. This combined retail activity facilitates an 'owned' space, particularly if the space is activated 24/7.

The activation of Dickson's Lane and its edges adds safe-place value as a permeable thoroughfare, with the continuous activation resulting in fewer opportunities for anti-social / intimidating behaviour. The 'certainty of safety' for retail tenants and their employees will also be enhanced.

Public Car Parking

There are three aspects to the public car parking, being vehicle ramping and entry, car park layouts and lobby access to vehicles, with the safe operation of the car park being critical to the Plot's 'safe place' reputation. In summary:

- The design indicates ramped entry and exit points from the Theatre Access Road, alongside the loading dock. This will ensure a concentration of vehicle movements which will assist in the tracking and monitoring of vehicle approaches and intent.
- Both the public and commercial ramps provide pre-entry off-roadway definitional certainty. It is understood that commercial retail tenant parking will be separately line marked.
- Entry / exit ramp lighting should be overhead to avoid shadowing or glaring, with graduated lighting intensity to enable visual discrimination of contrast between internal and external ambience. Design detail should also consider white non-reflective ceilings on all levels, supported by high illuminance overhead lighting throughout each level's layout, particularly in corners where normal shadowing could occur.
- The proposed configuration of vehicle parking is consistent with good passive and technical surveillance on all parking levels. The architecture provides good corridor sight lines along vehicle lengths but only limited 'between vehicle' (on approach) sighting. Where rectangular or square structural columns are specified, consideration should be given to creating 'false' round or elliptical facades to eye-level to minimise the opportunity for concealment.
- Illuminated and/or colour-coded signage throughout all (public) car park levels and lobbies will increase way-finding certainty and manage (control) access.

Harris Crime Prevention Services note that the drawings indicate no impediment to an efficient and effective security management regime of all levels, as well as access and egress patterns.

Streetscape Connectivity and Broader Public Domain Linkages

The footprint of the North West Plot integrates seamlessly with pocket gathering spaces and the Haymarket's pedestrian and cycle networks. The Boulevard is the key focus, with the legibility of the Plot further enhanced by the broader domain's spaciousness and the provision of a sympathetic, welcoming and safe place network.

Public domain activation within the Site will enhance its safe place reputation. Aside from the western edge, there is no public domain 'dead space' on approaches to, or surrounding, the Site. To ensure the safety of the western edge, casual pedestrian surveillance will be provided from approach activation along Dickson's Lane and the Theatre Access Road.

Further, there is a direct visual link between the Plot's main entry lobby and the Square. Coordinated and integrated activity support design within and surrounding the Plot's ground level public domain footprint, will complement the broader safe place vision. The public domain design also accords with neighbouring precinct plans including the UPN initiative and proposed Chinatown public domain improvements.

Mitigation Measures

The Report puts forward the following mitigation measures to ensure that CPTED is achieved:

- Promote outdoor retail to enhance surveillance and more purposefully activated spaces.
- Coat ramp walls (and other external facade areas near the vehicle/loading entry points) with graffiti resistant material.
- Vehicle entry / exit ramp lighting should be overhead to avoid shadowing or glaring.
- The detailed design of the carpark should consider white non-reflective ceilings on all levels, supported by high luminance overhead lighting throughout each level's layout, especially in corners where normal shadowing could occur.
- Where rectangular or square structural columns are specified in the carpark, consideration should be given to creating 'false' round or elliptical facades at eye-level to minimise the opportunity for concealment.
- Consideration should be given to installing CCTV cameras at the end of the carpark's lobby corridors. Subject to fire or other building regulations, consideration should also be given to specifying safety glass panels in the public lift doors to improve sight line certainty for those entering and exiting public car park lifts. Emergency help points should operate in or around all lift lobbies, including goods lifts.
- Illuminated and / or colour-coded signage should be provided throughout all (public) car park levels and lobbies to increase way-finding certainty and manage (control) access.
- The western boundary will require appropriate low level landscaping, lighting and CCTV (or IP Networked) treatment to reduce or prevent opportunities for 'loitering with intent'.
- The cycle entry will require appropriate CCTV, lighting and technical surveillance treatment including graduated ramp lighting, and the appropriate design of access doors / gates and security or emergency 'help' points.
- Landscaping within the undercroft should feature low level plantings to capitalise on the multi-angled surveillance sight lines.
- Lobby entry zones to the commercial and public car parks should utilise appropriate lighting and furniture design to enhance night time lobby entry security. A surveillance window should be provided where parking payment machines (an assumption) are located. Relocating them to the (eastern) wall would allow a window which could 'sweep' both (northern) corners to provide visual contact with persons entering the commercial and public lobbies.
- Camera surveillance should cover the public car park entry and corridor length.

5.21 Environmental and Construction Management

A Construction Management Plan (CMP) has been prepared by Lend Lease Project Management and Construction (**Appendix O**) which details the site construction and environmental management principles for the proposed development. The CMP details management principles which seek to manage the impact of construction activities in terms of public and employee safety, noise, vibration, air and water quality and construction traffic.

Traffic, Parking and Pedestrian Management (Construction)

The Construction Management Plan prepared by Lend Lease Project Management and Construction included at **Appendix O** provides details relating to traffic, parking and pedestrian management during the demolition and construction phase of the development. More specifically it outlines planned mitigation arrangements demonstrating how, during demolition and construction of the development, the pedestrian and vehicular movements will be addressed to minimise impact.

An overview of the key elements of traffic and parking management is provided below:

- Primary construction heavy vehicle egress will be via the established Exhibition Place/Darling Drive road network.
- All vehicles entering through advised gates in a forward direction with a speed limit of 10kmh.
- After delivery, vehicles will exit through designated gates, whenever possible in a forward direction.
- Truck movements to and from the site to be restricted to specified routes.
- Truck movements to be scheduled to minimise disruption to site operations, the local community, and the road network.
- It is anticipated that there will generally only be 3-4 truck movements per hour accessing the site for the duration of the development. In instances where this volume increases, e.g. for concrete pours, it will be controlled to alleviate any congestion to the surrounding traffic network.
- There is to be no construction parking provided on site, with use of public transport to be promoted (through the tendering process and site inductions etc.) and utilised.
- Maintain a controlled permit system for vehicles at access points, using only certified traffic controllers.
- Traffic movements and vehicles will conform to current RMS requirements.
- Appropriate directional signage and traffic control will be provided.
- Temporary road closures, single lane access and relocations during construction to be subject to coordination with appropriate authorities, and involve consultation with stakeholders.

In terms of pedestrian access and management, key measures include:

- Implementation of pedestrian diversions with appropriate protection
- Hoardings will be located around the periphery of the development site to protect pedestrian traffic from entering the site boundaries.
- Careful planning of hoarding locations, types and staging will aim to ensure access through and around the site is maintained, with only minor diversions expected so that the level of access is generally reflective of what is currently available.
- Provision of a new temporary pedestrian crossing of Darling Drive.

Construction Traffic

Construction traffic routes and access points detailed in the CMP have been established following consultation with the RMS and will be communicated to all contractors throughout the construction process. The primary heavy vehicle egress from the site will be via Darling Drive either via Pyrmont Bridge Road (north) or Ultimo Road/Harris Street (south). Construction traffic movements will be largely consistent throughout the construction program, with typically 3-4 additional truck movements per hour above the exiting traffic volumes.

Vehicular site access will be from Exhibition Place via the existing SEC carpark entrance and control measures will be implemented to ensure that unauthorised site access is prohibited. Major site entrance points will be manned to provide site security and ensure the safe and efficient operation of vehicle movements into and out of the site.

On-site parking for construction workers will not be provided, with the developer to convey information on local public transport routes and public car parking stations.

Sediment and Erosion Control

A detailed Erosion and Sediment Control plan has been prepared prior to the issue of a Construction Certificate in accordance with the DIPNR *Guidelines for Erosion and Sediment Control on Building Sites* and is included within the Civil Infrastructure Drawings provided at **Appendix J**.

This plan has been developed in accordance with the principles and site actions identified in the CMP in order to ensure that there are no unacceptable impacts on water quality and volumes within existing watercourses and stormwater drainage systems as a result of the proposed development.

Noise and Vibration

The CMP details noise and vibration management principles and measures which will be formalised in a detailed Noise and Vibration Management Plan prior to the issue of a Construction Certificate as recommended by the Environmental Noise and Vibration Impact Assessment.

Air Quality

An Air Quality Management Plan and Air Quality Monitoring Program will be implemented prior to issue of a Construction Certificate to detail preventative measures to minimise the impact of construction activities, including dust emissions, and monitoring measures to ensure that air quality issues are promptly identified and addressed.

Mitigation Measures

- Construction Traffic Management Plan to be included in tender documents for all works;
- Construction Traffic Management plan to form part of site induction package;
- Subcontractors/suppliers to submit formal delivery booking requests 5 business days prior to delivery;
- Developer to establish holding areas for urgent and emergency vehicles within the development site;
- An Air Quality Management Plan and Air Quality Monitoring Program will be implemented prior to issue of a Construction Certificate detailing preventative and monitoring measures to minimise construction impacts on air quality.

5.22 Air Quality

An Air Quality Assessment has been prepared by AECOM Australia and is appended to The Haymarket Concept Proposed (SSDA2) to assess the impact of emissions from the Cross City Tunnel ventilation stack located to the south of the IMAX theatre between the Western Distributor westbound viaducts. The Air Quality Assessment considered existing monitoring data of air quality in the vicinity of the SSDA4 Site, including monitoring undertaken in Tumbalong Park as part of post-commissioning testing following the opening of the Cross City Tunnel in 2005/06.

Ambient air quality is most affected within a 100 metre radius of tunnel ventilation stacks, with the impact of increased pollutant concentrations between 100 metres and 1 kilometre of these stacks being generally negligible. This affects only a small portion of the SICEEP site, being existing areas of public domain which are proposed to be upgraded as part of the overall SICEEP project. The Haymarket precinct is located 400-600 metres to the south of the ventilation stack.

Existing Air Quality Conditions

Monitoring of air quality in the vicinity of the SICEEP site (within Tumbalong Park) was undertaken for a period of 12 months between September 2005 and August 2006. The monitoring results from the Cross City Tunnel post-commissioning tests are taken to be an accurate reflection of air quality impacts of the tunnel ventilation stack within the broader SICEEP precinct. During this time period, the relevant criteria for Nitrogen Oxides and Carbon Monoxide were not exceeded. Particulate Matter criteria were exceeded on a total of five (5) occasions, however these exceedances were found to be related to external events unrelated to the ventilation of the Cross City Tunnel (e.g. Sydney Basin-wide events including bushfires and localised effects of fireworks).

Mitigation Measures

No mitigation measures are required as future occupants of the proposal as the SICEEP precinct will not be subject to air pollution in excess of the NSW EPA *'Approved Methods for the Modelling and Assessment of Air Pollutants in NSW'* as a result of the SSDA4 Site's proximity to the Cross City Tunnel ventilation stack.

5.23 Development Contributions

The proposed development will contribute to the delivery of long lasting and significant public benefits to Sydney and NSW (refer to Section 4.0 for further details), and therefore the burdening of the development with additional contributions undermines the objectives of supporting the development of the Darling Harbour area – an area of state significance. In particular, the SSDA4 proposal will provide public car parking to support the operations of the core facilities. The SICEEP Site is specifically excluded from all City of Sydney S94 Contributions Plans as well as any contributions under S61 of the *City of Sydney Act 1988*. The exclusion of the SICEEP Site (and broader Darling Harbour Precinct) reflects that it has its own special planning regime that applies, and that the State Government has since the 1980s (originally as part of the State's Bicentennial Program) set out to promote and encourage a variety of tourist, educational, recreational, cultural and commercial facilities across Darling Harbour. There is therefore no formal mechanism to levy development across the SICEEP Site.

Accordingly there are no grounds for the imposition of development contributions in relation to the proposal.

5.24 Site Suitability

Having regard to the characteristics of the site and its location, the proposed commercial building and public car park is considered suitable for the Site as it:

- will repair the urban fabric in a poorly connected area of the CBD;
- Will contribute to a new vibrant neighbourhood through the provision of a mix of complementary land uses with ground-level streetscape activation;
- is capable of being developed in a manner that will minimise impacts to the natural, historical, and environmental qualities of the Site;
- will result in only minor environmental impacts that can be appropriately managed and mitigated;
- will facilitate the renewal of the Site with considerable benefits to the local community;
- has excellent access to a wide range of business services and facilities that will support future tenants of the commercial office space;
- is well served by public transport; and
- is in close proximity to high quality public open space (existing and proposed), and employment and education opportunities.

5.25 Public Interest

SSDA4 is considered to be in the public interest as it will:

- contribute to the development of The Haymarket into one of Sydney's most innovative residential and working districts;
- support the creation of approximately 2,100 new jobs during construction, with ongoing employment opportunities for over 2,000 people through The Haymarket precinct;
- provide public car parking to support the operation of the new International Convention Centre, Exhibition Centre and The Theatre and thereby contribute directly to economic growth within the State;
- create new functional, vibrant and connected ground-level active uses which interact with new public spaces within The Boulevard and Dicksons Lane;
- provide a quality visitor experience and establish The Haymarket as a distinctive destination within a revitalised quarter of the City; and
- support Sydney's development as a compact and well-connected city.

6.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 13** below. These measures have been derived from the assessment in **Section 5.0** and those detailed in appended consultants' reports.

Table 13 – Mitigation Measures

Mitigation Measures

Archaeology

Indigenous Archaeology

In order to mitigate any impacts to potential aboriginal archaeological deposits, Comber Consultants advise that archaeological testing, recording and salvage should occur in areas where piling or any other ground disturbance that will penetrate the fill is to be undertaken within the area of the original foreshore. In addition, the following measures are proposed:

- Prior to commencement of the monitoring and testing, a research design and management strategy should be prepared.
- Monitoring, recording and testing should be undertaken in partnership with the Metropolitan Local Aboriginal Land Council.
- If any Aboriginal "objects" (as defined under the National Parks & Wildlife Act 1974) are located during the course of the testing program, the Metropolitan Local Aboriginal Land Council should apply for a Care Agreement with the Department of Environment and Heritage to enable them keep the objects.
- The program of sub-surface testing should be coordinated with Casey & Lowe, the archaeologists undertaking testing/recording in respect of the historical archaeology.
- If any previously undetected Aboriginal "objects", artefacts or sites are uncovered, work must cease in the vicinity of that object, artefact or site and further advice sought from the archaeologist who undertook the program of sub-surface testing.

Non-Indigenous archaeology

In order to minimise impacts to known and potential archaeological resources the following mitigation measures are proposed by Casey and Lowe:

- Archaeological remains of State significance within The Haymarket area should be retained in situ, utilising the strategies outlined in the Assessment.
- Archaeological testing shall be undertaken prior to the preparation of detailed designs.
- Where there are impacts on archaeological remains, archaeological recording will be undertaken in accordance with Heritage Council and Heritage Branch guidelines and best practice methodologies.
- A Non-indigenous Archaeological Research Design and Management Strategy will be prepared following the preparation of detailed designs.
- Construction site protocols are to be prepared to manage and minimise intended and unintended impacts.
- Any proposed development in the vicinity of the Hay Street stormwater channel will be undertaken in accordance with engineering and heritage advice. A specific Heritage Impact Statement may be required.
- A repository for artefacts is to be provided by SHFA following the completion of the archaeological program.
- Opportunities for public interpretation of the archaeology should be provided within the redevelopment.

Mitigation Measures

Building Code of Australia (BCA) and Accessibility

- The design recommendations contained within the Access Review prepared by Morris Goding Accessibility Consulting dated 8 May 2013 will be adopted in the detailed design documentation prior to the issue of a Construction Certificate for new works.
- The final development will comply with the provisions of the Building Code of Australia

Construction and Environmental Management

- A Construction and Environmental Management Plan shall be prepared incorporating the principles and management practices detailed in the Preliminary Construction Management Plan prepared by Lend Lease Development and Construction dated May 2013.
- Construction Traffic Management Plan to be included in tender documents for all works;
- Construction Traffic Management plan to form part of site induction package;
- Subcontractors/suppliers to submit formal delivery booking requests 5 business days prior to delivery; and
- Developer to establish holding areas for urgent and emergency vehicles within the development site.

Contamination

- Contamination and validation is to be undertaken in accordance with the Site Specific Remedial Action Plan prepared by Coffey dated June 2013; and
- A detailed acid sulphate soils management plan will be prepared generally in accordance with the Acid Soils Assessment and Preliminary Management Plan prepared by Coffey dated 11 March 2013 and incorporated in the Site-Wide Construction Environmental Management Plan (CEMP) and implemented during the construction phase.

Crime Prevention Through Environmental Design (CPTED)

- Promote outdoor retail to enhance surveillance and more purposefully activated spaces.
- Coat ramp walls (and other external facade areas near the vehicle/loading entry points) with graffiti resistant material.
- Vehicle entry / exit ramp lighting should be overhead to avoid shadowing or glaring.
- The detailed design of the carpark should consider white non-reflective ceilings on all levels, supported by high luminance overhead lighting throughout each level's layout, especially in corners where normal shadowing could occur.
- Where rectangular or square structural columns are specified in the carpark, consideration should be given to creating 'false' round or elliptical facades at eye-level to minimise the opportunity for concealment.
- Consideration should be given to installing CCTV cameras at the end of the carpark's lobby corridors. Subject to fire or other building regulations, consideration should also be given to specifying safety glass panels in the public lift doors to improve sight line certainty for those entering and exiting public car park lifts. Emergency help points should operate in or around all lift lobbies, including goods lifts.
- Illuminated and / or colour-coded signage should be provided throughout all (public) car park levels and lobbies to increase way-finding certainty and manage (control) access.
- The western boundary will require appropriate low level landscaping, lighting and CCTV (or IP Networked) treatment to reduce or prevent opportunities for 'loitering with intent'.
- The cycle entry will require appropriate CCTV, lighting and technical surveillance treatment including graduated ramp lighting, and the appropriate design of access doors / gates and security or emergency 'help' points.
- Landscaping within the undercroft should feature low level plantings to capitalise on the multi-angled surveillance sight lines.

Mitigation Measures

- Lobby entry zones to the commercial and public car parks should utilise appropriate lighting and furniture design to enhance night time lobby entry security. A surveillance window should be provided where parking payment machines (an assumption) are located. Relocating them to the (eastern) wall would allow a window which could 'sweep' both (northern) corners to provide visual contact with persons entering the commercial and public lobbies.
- Camera surveillance should cover the public car park entry and corridor length.

Infrastructure and Utilities

The following mitigation measures are designed to protect the integrity and functioning of the existing utility infrastructure:

- Undertake a desk-top investigation of existing services using Dial Before You Dig information and site observations;
- Undertake a site survey to accurately locate existing infrastructure assets where practical;
- Undertake site exploration works where considered necessary to more accurately locate existing infrastructure assets and test for unknown services;
- Continue consultation with utility providers to confirm location of services and to obtain all necessary consents to work in their vicinity;
- Incorporate utility technical and hazard requirements into the design and construction documentation;
- Ensure safe work methods statements and inspection and test plans are prepared by accredited contractors;
- Implement and record pre-start work checklists;
- Conduct workshops with utility providers where diversion of, connection to or construction close to critical assets is required;
- Ensure field safety inspectors are present during critical works as determined by each utility provider.

As design progresses or as new information becomes available, the above process will be adjusted or supplemented as required to ensure existing infrastructure assets are adequately protected. Ongoing consultation and design development with the relevant utility providers should continue to be undertaken throughout the process.

Noise

- A Construction Noise and Vibration Management Plan detailing measures to limit and control construction noise generally in accordance with the Noise and Vibration Impact Assessment prepared by Renzo Tonin & Associates dated May 2013 will be prepared and incorporated within the Construction Environmental Management Plan prior to the issue of a Construction Certificate.
- Dilapidation surveys of buildings and structures within the immediate vicinity of the site will be undertaken to ensure any potential damage as a result of vibration or other works is identified and rectified.
- The minimum insertion losses for acoustic treatments to plant equipment detailed in the Environmental Noise and Vibration Impact Assessment prepared by Renzo Tonin & Associates dated May 2013 will be provided and detailed in Construction Certificate drawings.
- Future applications for the fitout and use of ground-level tenancies will be accompanied by an acoustic assessment detailing impacts and mitigation measures for residential amenity.

Non-Indigenous Heritage

An Interpretation Strategy for the entire SICEEP Site is to be prepared in accordance with the NSW Heritage Manual and the OEH's Heritage Interpretation Policy. SHFA's 2008 publication '*Telling the Stories of Darling Harbour*' is an interpretation strategy based on ten distinct themes. Themes relevant to the Haymarket Site and potential opportunities for their interpretation are reproduced below:

- Gathering Cockles- the first people, and European Settlement.
 - Place in the paving quotes and thoughts describing the original natural landscape.
 - Use installations to showcase the range of traditional lifestyle skills including collecting foods,

Mitigation Measures

- making tools and raising families.
 - Mark in the paving the outline of the harbour and creek line prior to reclamation.
 - Mark in the paving the Hay Street stone culvert alignment and discuss the loss of natural creek lines and the decline in urban water quality.
- Steaming ahead – the industrial revolution comes to Sydney.
 - Mark the Hay Street sewer and discuss public health issues prior to sewers – the sewer in Darling Harbour is one of the world's first.
 - Identify the Dickson's Mill site with a focus on Dickson and describe the first applications of his own designed steam engines in the process of timber milling, brewing and foundry works.
- Power to the people – how Darling Harbour powered Sydney with electricity, lit it with gas, provided the power to drive its trams and hydraulic lifts.
 - Focus on the Pumphouse by presenting plans of the city showing network of pipes and images of typical lifting devices, particularly steam driven bank vault doors.
- Decline and rebirth – Darling Harbour's transformation from port and industrial area to leisure tourism precinct.
 - Present chronological images showing the transformation from its early colonial natural state to its shipbuilding and wharf period, its peak industrial period and its conversion to a public landscape.

The SOHI recommends that the Interpretation Strategy *'Telling the Stories of Darling Harbour'* should be incorporated into the detailed design of the SICEEP redevelopment, and that the process should include consultation with relevant stakeholders. The interpretation strategy would be complemented by appropriate interpretative devices, as outlined in the Strategy.

Reflectivity

- All exterior façade elements should limit light reflectivity to 20% or less;
- Continued assessment of façade and roof elements should be undertaken in the detailed design of the development to ensure no potential nuisance reflections are generated; and
- Surface treatments on the angled metal façade panels on the east façade should be investigated further in the detailed design of development to minimise glare.

Water Cycle Management

- Flood mitigation measures for ground level tenancies will be implemented generally in accordance with the recommendations of the letter prepared by Flooding Solutions Advisory group dated 24 May 2013. These measures will ensure that flood protection is afforded to ground level tenancies during flood events up to and including the Probably Maximum Flood event accounting for sea level rise as detailed in the Flooding, Stormwater and WSUD Report prepared by Hyder Consulting dated 31 March 2013.
- A formal floodplain risk management plan with respect to evacuation and refuge is to be developed.
- Buildings and structures are to be designed for hydraulic loadings up to the PMF event.

Operational Waste Management

- Waste facilities and servicing will be provided generally in accordance with the Waste Management Plan prepared by Waste Audit and Consultancy Services dated 10 May 2013.

7.0 Justification of the Proposal

In general, investment in major projects can only be justified if the benefits of doing so exceed the costs. Such an assessment must consider all costs and benefits, and not simply those that can be easily quantified. As a result, the EP&A Act specifies that such a justification must be made having regard to biophysical, economic and social considerations and the principles of ecologically sustainable development.

This means that the decision on whether a project can proceed or not needs to be made in the full knowledge of its effects, both positive and negative, whether those impacts can be quantified or not.

SSDA4 involves the development of a mixed use commercial building and public car park and associated works. The assessment must therefore focus on the identification and appraisal of the effects of the proposed change over the Site's existing condition.

Various components of the biophysical, social and economic environments have been examined in this EIS and are summarised below.

7.1 Social and Economic

7.1.1 Economy and Employment

The NSW Government's number one priority is to restore economic growth and establish NSW as the first place in Australia to do business. The SICEEP Project forms a central part of achieving this ambition of "making NSW number one again" and reinforcing Sydney's status as Australia's global city.

With the delivery of new world class convention, exhibition and entertainment facilities, re-positioning Sydney as the major events and business venue in the Asia Pacific, it will alone generate \$200 million annual economic benefit for NSW, equating to more than \$5 billion over the course of the 25-year operation (contractual) period of the new facilities. SSDA4 provides for public car parking to support the operation of these core facilities.

The Haymarket will create approximately 2,100 new jobs during construction, with ongoing employment opportunities for over 2,000 people.

The new residential population to be established within The Haymarket along with the new workers within the SSDA4 and other buildings will also generate direct expenditure on retail within the vicinity of their place of residence and work.

While some of this expenditure would be captured by the new retail to be provided across the SICEEP Site (in particular The Haymarket), the SICEEP Site is not expected to provide a full range of comparison goods or dining/entertainment. This means that the new population would increase the expenditure available for retail tenancies elsewhere in the locality.

7.1.2 Housing Supply and Choice

Once fully developed The Haymarket (based on the indicative design scheme) is expected to accommodate approximately 2,360 dwellings (comprising 1,360 residential apartments and 1,000 student beds) with a resident population in the order of 3,400 – 3,700. SSDA4 ensures that the amenity of future dwellings within the precinct are protected through consistency with building form controls (including upper level setbacks) and implementation of mitigation measures at the detailed design stage with respect to flooding, noise and air quality and improved through the provision of ground-level uses which contribute to the availability of services and activity within the precinct.

The Haymarket precinct will accommodate a mix of housing types. By providing several residential typologies and a range of apartment sizes (details of which are to be the subject of detailed Stage 2 DAs), The Haymarket seeks to meet the City of Sydney's vision for a diverse and vibrant community. Underpinning the type and size of dwellings to be provided is supporting attainable city apartment living, targeted at young professionals and students.

Located on the edge of the City Centre, with a high level of public transport accessibility, proximity to employment and activity centres, and access to extensive areas of open space, The Haymarket supports key Local and State Government strategic planning objectives and contributes towards achieving housing targets.

7.1.3 Community Services and Facilities

In addition to delivering world-class facilities, the SICEEP Project is also a major urban renewal project that will deliver significant benefits for the entire City.

Key benefits to the community of SSDA4 and the SICEEP Project include:

- Including potential space for an 'IQ Hub' within the ground-level active use spaces within the North West Plot subject of this application (SSDA4) to provide low-cost rental studios and collaborative spaces to support tech-industry start-ups;
- Providing an enhanced, enlarged and dynamic public domain to be enjoyed by residents and visitors alike;
- Providing improved permeability and better connections to surrounding areas (including overcoming existing poor east-west connections between Pyrmont and the CBD);
- Creating a vibrant and activated precinct for Sydneysiders and visitors to enjoy, providing active ground-level tenancies within SSDA4 and a mix of retail shops, public spaces, dining areas, a hotel and other accommodation throughout The Haymarket ;
- Exploring a new child care facility within The Haymarket;
- Providing for a new Library within The Haymarket (subject to Council agreement and funding);
- Providing free Wi-Fi throughout the SICEEP Site;
- Offering local community groups' access to meetings rooms within the Convention/Exhibition Centre free of charge;
- Prioritising employment requests from suitably qualified and experienced applicants who are residents of the local community and surrounding areas;
- Establishing working relationships and ongoing support to selected local schools (e.g. providing the opportunity for students to attend appropriate events within conferences/exhibitions that have educational benefits, assisting with fundraising initiatives);

- Offering community cooking initiatives (e.g. providing lessons in basic nutrition, healthy eating, and affordable meals for those in the local community most in need); and
- Increased safety and security in the surrounding public domain.

7.1.4 Cultural Impacts

It is envisaged that public art will be provided within The Haymarket which may reflect heritage and cultural theme, and that an urban water stream will be installed as part of the public domain works, which will interpret the Site's former location within Cockle Bay.

It is also envisaged that a number of cultural programs may be accommodated within the Haymarket, including multicultural film screening and food fares, a permanent home for the Chinese Markets, and a 'living gallery', which will draw upon the collections of local museums to interpret local stories, and will include digital and interactive installations within programmable spaces.

In summary, the indicative cultural initiatives envisaged for The Haymarket have the potential to greatly increase the cultural significance of the locality and its wider vicinity, and are therefore considered to have a positive cultural impact. These initiatives do not strictly relate to the current proposal and will form part of other detailed SSDA to be submitted to the Department.

7.2 Biophysical

The proposed development is to be carried out within a highly disturbed urban environment which largely comprises reclaimed land. As set out in **Section 2** of this EIS, the SSDA4 Site does not possess any significant biophysical elements. The SSDA4 Site has been subject to a range of urban and industrial uses in the past, and has been highly modified to reach its current state. The carrying out of the proposed development is not expected to adversely impact on any biophysical elements.

7.3 Ecologically Sustainable Development

The principles of ecologically sustainable development are set out in section 6(2) of the *Protection of the Environment Administration Act 1991* (NSW). The principles of ESD include intergenerational equity, the precautionary principle, conservation of biological diversity and ecological integrity and improved valuation, pricing and incentive mechanisms. The principles of ESD have informed the design, construction and operation of the proposed commercial office building and public car park.

It is appropriate for decisions made under the EP&A Act to have regard to the objects of the Act, as set out in section 5 of the Act, including ESD.

The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) *the precautionary principle - namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*
 - (i) *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*

- (ii) *an assessment of the risk-weighted consequences of various options,*
- (b) *inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,*
- (c) *conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*
- (d) *improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:*
 - (i) *polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
 - (ii) *the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
 - (iii) *environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

Importantly, the development of the North West Plot is consistent with the principles of ESD as it meets the needs of the present without compromising the ability of future generations to meet their own needs. ESD design measures have been integrated into the design of the core facilities as detailed in the Sustainability Report prepared by Lend Lease Design at **Appendix I** and summarised at **Section 3.8** of this report. Each principle of ESD as relevant to the proposed development is addressed below.

7.3.1 Precautionary principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment. Measures included within SSDA4 to mitigate against possible future risks include:

- Targeting a 5-star Green Star rating under the GBCA Office v3 rating tool indicating 'Australian Excellence' in sustainable design;
- Incorporation of high efficiency mechanical plant and electrical services to reduce energy dependence;
- Locate commercial office development in close proximity to public transport and implement a Green Commuter Strategy to reduce reliance on private vehicle use;
- Include stormwater treatment measures to eliminate present or future impacts on water quality;
- Incorporate rainwater capture and storage for reuse for toilet flushing and landscape irrigation to reduce reliance on mains potable water; and
- Establishing waste diversion targets which reduce reliance on landfill facilities.

When taking into account the above ESD measures, this EIS has not identified any serious threat of irreversible damage to the environment and therefore the precautionary principle is not relevant to the proposal.

7.3.2 Inter-generational equity

Inter-generational equity is concerned with ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. SSDA4 has been designed to benefit both the existing and future generations by:

- providing new employment floorspace in close proximity to public transport and the existing commercial core;
- provide support services (including public car parking) for the SICEEP core facilities to assist in securing Sydney's position as the premier business tourism destination in Australia, thereby providing ongoing economic and employment benefits to residents and the State of NSW;
- maintaining State heritage listed items for future generations to appreciate and enjoy;
- providing lasting benefits in terms of streetscape activation, urban structure and connectivity within Darling Harbour to promote walking, cycling and pedestrian connectivity; and
- implementing safeguards and management measures to protect environmental values.

SSDA4 has integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long term implications such as waste disposal would be avoided and/or minimised through construction planning and the application of safeguards and management measures described in this EIS and the appended technical reports.

7.3.3 Conservation of biological diversity and ecological integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration. The proposal would not have any significant effect on the biological diversity and ecological integrity of the study area. Design and management measures to reduce excavation within the site and reduce the export of gross pollutants into the waterway all contribute directly the conservation of biological diversity and ecological integrity within Sydney Harbour.

7.3.4 Improved valuation, pricing and incentive mechanisms

The Darling Harbour Live team was selected by Infrastructure NSW to deliver the SICEEP project based on the economic, environmental and social merits of the proposed masterplan. This plan has now been refined and has undergone additional detailed design to ensure that the proposed development ultimately achieves the best development outcome for the across all evaluation criteria.

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. Mitigation measures incorporated in SSDA4 for avoiding, reusing, recycling and managing waste during construction and operation would be implemented to ensure resources are used responsibly in the first instance in order to divert resources from landfill.

8.0 Conclusion

This Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of the proposed mixed use commercial office building and public carpark on the North West Plot of The Haymarket Precinct within the overall SICEEP Project. The EIS has addressed the issues outlined in the Director-General's Requirements (**Appendix A**) and accords with Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* with regards to consideration of relevant environmental planning instruments, built form, social and environmental impacts including traffic, noise, construction impacts and stormwater.

Having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development, the carrying out of the project is justified and warrants approval for the following reasons:

- The proposal is permissible with consent and meets all requirements of the relevant planning controls for the site;
- The proposal is consistent with the principles of ecological sustainable development as defined by Schedule 2(7)(4) of the *Environmental Planning and Assessment Regulation 2000* (refer to Section 7.3);
- The proposed development is consistent with the land use, built form controls and design guidelines for The Haymarket precinct established by Denton Corker Marshall under SSDA2;
- The site is adequately serviced with potable water and stormwater infrastructure and electrical and communication services; and
- The provision of public car parking will support the operations of the overall SICEEP Core Facilities and will contribute to the provision of significant benefits to the State;
- The provision of a vibrant mixed use precinct will further support and strengthen the liveability of Sydney.

Given the planning merits described above, and the significant public benefits associated with the proposed development, it is recommended that this application be approved.