

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

BUILT FORM AND PUBLIC REALM REPORT FOR SSDA 1

Prepared for Lend Lease
June 2013

HASSELL+POPULOUS

HASSELL+POPULOUS

Contact

Ken Maher Chairman
kmaher@hassellstudio.com

Richard Breslin Senior Principal
richard.breslin@populous.com

Angus Bruce Principal
abruce@hassellstudio.com

HASSELL + POPULOUS
Level 2 Pier 8/9
23 Hickson Road
Sydney NSW 2000
T +61 2 9101 2000
© March 2013

HASSELL Limited
ABN 24 007 711 435
Populous Design Pty Limited
ABN 55 072 891 993

Contents		Page	
1.0	Executive Summary	04	
1.1	Responses to Development Application Submissions	05	
2.0	Introduction	07	
2.1	Director Generals Requirements General Requirements	08	
2.2	Director Generals Requirements Specific Requirements	09	
3.0	Background	10	
4.0	Site Description	11	
4.1	Components	11	
4.2	History	12	
4.3	Topography	17	
4.4	Flora	18	
4.5	Geology	19	
4.6	Shoreline	20	
4.7	Open Spaces	22	
4.8	Hard Spaces	23	
4.9	Water Interface	24	
4.10	Green Spaces	25	
4.11	Cycle Network	26	
4.12	Communities	27	
5.0	Existing Infrastructure	28	
6.0	Planning Approvals Strategy	29	
7.0	Overall Precinct Strategy	30	
7.1	Concept	30	
7.2	Urban Program	31	
7.3	5 Key Design Principles	32	
7.4	Design of the Public Realm	35	
7.5	Integration	36	
7.6	Design Excellence	36	
7.7	Goods Line Pedestrian Network	37	
8.0	Public Spaces and Activities	38	
8.1	The Boulevard	38	
8.2	Tumbalong Park	39	
8.3	Terraced landscape and Event Deck	40	
8.4	Pier Street and Chinese Garden Plaza	41	
8.5	Harbourside Place and Tumbalong Place	42	
8.6	Darling Drive	43	
8.7	Schedule of Public Domain Finishes	44	
9.0	Water Management	50	
9.1	Water Sensitive Urban Design		
9.2	Urban Stream	51	
10.0	Public Art Strategy	53	
11.0	Connectivity, Activation and Accessibility	56	
11.1	Connectivity	56	
11.2	Public Engagement	58	
12.0	Activation Planning	60	
12.1	Australia Day	60	
12.2	New Years Eve	60	
12.3	Sporting Event “Fan Zone”	61	
12.4	Cultural Food Festival	61	
12.5	Cultural Dance Festival	62	
12.6	Non Event Day	62	
13.0	Response to INSW Urban and Public Realm Guidelines	63	
13.1	Urban Structure	63	
13.2	Urban Grain	63	
13.3	Density and Mix	64	
13.4	Height and Massing	64	
13.5	Facade and Interface	66	
13.6	Solar Access and Shadowing	68	
13.7	Street Activation	68	
13.8	Details and Materials	68	
13.9	Planting	69	
13.10	Topography	69	
13.11	Wildlife and Ecology	69	
13.12	Microclimate	69	
13.13	Lighting	69	
13.14	Furniture	69	
14.0	Signage and Wayfinding	70	
14.1	Naming and Branding in the Public Realm	71	
15.0	ICC Convention	72	
15.1	Built Form	72	
15.2	Building Finishes	72	
15.3	Internal Arrangement	74	
15.4	In Summary	75	
16.0	ICC Exhibition	76	
16.1	Built Form	76	
16.2	Building Finishes	78	
16.3	Internal Arrangement	79	
16.4	In Summary	80	
16.5	The Event Deck	81	
17.0	The Theatre	82	
17.1	Built Form	82	
17.2	Building Finishes	82	
17.3	Internal Arrangement	84	
17.4	In Summary	84	
18.0	Retail Outlets	85	
18.1	ICC Convention	85	
18.2	ICC Exhibition	85	
18.3	The Theatre	85	
19.0	Loading	86	
19.1	ICC Convention	86	
19.2	ICC Exhibition	86	
19.3	The Theatre	86	
Appendix			
i Architectural DA Drawings			
ii Public Domain DA Drawings			

1.

EXECUTIVE SUMMARY

The design being put forward by the Darling Harbour Live consortium has referenced the unique and identifiable character that Sydney has on a National and International basis. It is Australia's postcard to the world.

The western edge of Sydney's CBD has witnessed significant growth over the past 25 years. With a focus on providing residential, commercial and public facilities within the surrounding area, Darling Harbour is now considered a place to live, work and play.

The design presented within this report reflects upon the rich historical and natural context of the Darling Harbour precinct and its importance as a public open space within the city as one of our most frequented places by local and tourist alike.

In designing ICC Sydney, Darling Harbour Live has responded to two key drivers with a focus on the public interest:

- The functional requirements of a world class convention, exhibition and entertainment centre to deliver economic benefits to Sydney and New South Wales; and
- The latent urban design opportunity within the Darling Harbour Precinct, that will deliver to the people of New South Wales now and into the future, an enhanced Public Realm outcome and experience.

The design builds upon and enhances the wider framework of Sydney's open places and spaces, water engagement, green spaces, pedestrian and cycle networks. Of particular importance has been creating and enhancing seamless urban pedestrian connections through the precinct between all the communities bounding Darling Harbour.

The precinct itself has been defined around five key principals: the north south boulevard; the three primary public open spaces- The Waterfront, Tumbalong Park and Haymarket Square; Harbourside place and Tumbalong place East-West connections; the International Convention Centre (ICC) and ICC Hotel to the north with The Theatre to the south as anchor buildings; and the terraced landscape over the single level exhibition hall.

Careful consideration has gone into developing a built program that will provide the economic benefits to Sydney through the convention, exhibition and entertainment business. Transforming the existing facilities to deliver integrated venues which are world class and second to none globally, while enhancing the scale and quality of the public realm to optimise engagement and connection to the wider Darling Harbour precinct. The following facilities have been designed and enhanced within the precinct:

- Tumbalong Park increased open space by 3,000m²;
- 35,000m² of dedicated exhibition halls with an additional 5,000m² of flexible exhibition space (total 40,000m²);
- 8,000 seat entertainment centre, scaleable to a 6,000 seat plenary;
- 2,500 seat plenary hall in the ICC;
- 1,000 seat plenary hall in the ICC;
- 2,000 person banquet room in the ICC;
- 8,500m² of dedicated meeting rooms across all core facilities; and
- 5,500m² public event deck.

The design proposal will ensure that a distinctively Sydney experience is provided for all who visit the precinct, arising out of the dominant landscape character and the enhancement of this experience through the architectural composition which reinforces the topography and is responsive to the quality of light by day and night.



1.1

RESPONSES TO DEVELOPMENT APPLICATION SUBMISSIONS

The design team has reviewed and considered the submissions to the Development Application thoughtfully and we have responded appropriately where required to address issues raised. Following is a summary list of design amendments that address the Development Application submissions. The body of the text of this report has been updated to reflect these amendments where appropriate.

THE ICC

- Revision of overall form and mass to reduce visual bulk and perceived height by;
 - _breaking the overall mass into three primary masses
 - _introducing an external terrace to the 'Grand Ballroom' level'
 - _pitching the roof down towards to perimeter above the Grand Ballroom to lower the height at the perometer
- Introduction of greater articulation to the western and south facades of the 'Darling Harbour Theatre' to address concern about the 'blandness' of these faces.
- Refinement of the roof to integrate plant and exhaust ducts systems to present a thoughtful and neater '5th facade' when viewed from the surrounding higher neighbours.
- Refinement of ground level planning to move lower the facade back from the Woodward fountain at the ground plane.

ICC Exhibition

- Revision to the cladding to the upper level loading dock to introduce greater articulation and visual depth. This has been achieved by angling the cladding panels and overlapping them slightly to introduce light and shade and a reduced sense of scale to the facade, and varying the colour of panels.
- Refinement of the roof to present a thoughtful and neater '5th facade' to the surrounding higher neighbours.
- Refinement of cladding to the base of the building to present a more thoughtful and engaging face to the public realm.

The Theatre

- Refinement of the overall form and mass to reduce the height of the Theatre roof edge along the western side.
- Refinement of the loading dock strategy to provide a more logical and efficient loading dock with improved access off and onto Darling Drive using a one-way flow through system.
- Refinement of the car-parking to allow entry and exit directly off Darling Drive before the round-about so drivers have the option on exiting to go either east over Pier Street, or south & north on Darling Drive.
- Refinement of the cladding system to the 'solid' areas of the building form to introduce improved visual depth during the day through a play of light and shade offered by a 'perforate' cladding.
- Refinement of the roof to integrate plant and exhaust ducts systems to present a clean '5th facade' when viewed from surrounding higher neighbours.

Public Realm

- Realignment to the paths across Tumbalong Green to reflect pedestrian desire lines.
- Deletion of a stair at the northern light rail stop to simplify the route by the inclusion of a ramp only.
- Developed design of Tumbalong Place to better consider the red carpet event mode and pedestrian movements through the space. The revised design also considers activation of the space through the provision of raised terraces that create informal performance and gathering spaces.
- Developed taxi rank configuration to the south of the Theatre. Taxi rank has been relocated to be closer the Boulevard – the main pedestrian spine.
- Refinement of the existing Pier Street pedestrian connection to make it DDA compliant.
- Refinement and integration of the folded landscape with the revised northern Exhibition building entrance to present a consistent design language along the eastern Exhibition facade.
- Refinement to the design of the ICC steps to increase the minimum clearance to the Woodward fountain cartilage.



The Boulevard with ICC Exhibition in background

2.

INTRODUCTION

This report supports a State Significant Development Application (SSD _5752_2012) submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

The Application seeks approval for construction of the Public Private Partnership (PPP) component as part of the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) Project at Darling Harbour.

The SICEEP Project comprises three components:

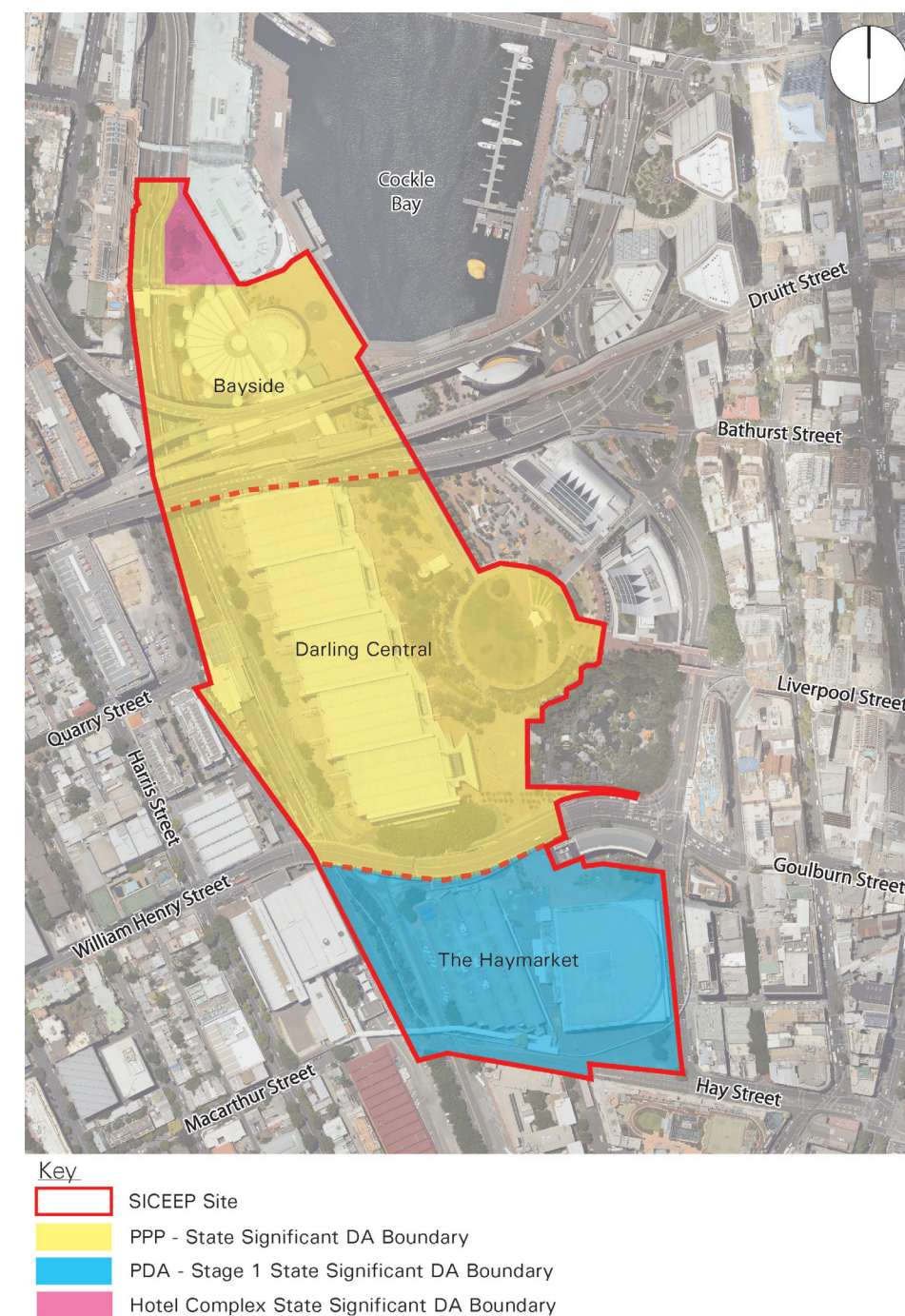
- The PPP component which includes the Convention Centre, the Exhibition Centre, a new Theatre, and associated public domain improvements within the site referred to as Bayside and Darling Central (subject of this application)
- A new mixed use residential neighbourhood, community facilities, creative workplaces, and public square in the southern sector of the SICEEP Precinct referred to as The Haymarket
- A new Hotel in the northern sector of the SICEEP Precinct within part of the site referred to as Bayside

Together these three components will deliver Australia's global city world class convention, exhibition and entertainment facilities that can compete effectively in the national and international events markets. The SICEEP Project importantly forms a critical element of the NSW Government's aspiration to "make NSW number one again". The overall project also involves the creation of a new integrated precinct within the city that will link together currently disconnected parts including Chinatown, the UTS campus, and Pyrmont. Given the integrated nature of the project, reference is made to the three components of the project in the report, although the application applies only to the PPP component.

The proposed development involves construction of the PPP component of the SICEEP Project, comprising new, integrated and world-class convention, exhibition and entertainment facilities with associated retail and public facilities, as well as public domain improvements.

The application more specifically seeks approval for the following development:

- Demolition of specific existing structures on the site, including existing Sydney Convention Centre (part), the Sydney Exhibition Centre, and the Sydney Entertainment Centre;
- Associated tree removal and replanting;
- Construction of a new and integrated Convention, Exhibition and Entertainment Centre;
- Public domain improvements, including:
 - reinvigorating and expanding Tumbalong Park;
 - provision (part) of a new active north-south pedestrian connection (known as the Boulevard);
 - provision of new east-west connections, including Harbourside Place and Tumbalong Place;
 - Provision of a pedestrian bridge link from Quarry Street;
 - Retention of the tidal cascade water feature;
 - Reconfiguration and upgrade of Darling Drive (part);
 - Provision of a new square adjoining the Chinese Garden;
 - Provision of a new open space 'event deck' (connected with the Exhibition Centre);
 - Integrated art, play zones, water play and recreation areas;
 - Provision of retail kiosks;
- Provision of parking within the Exhibition and Theatre facilities, including retention of the existing basement under Exhibition;
- Ground and elevated loading docks (accessed off Darling Drive) for Convention, Exhibition and Theatre facilities;
- Two vehicle drop off points off Darling Drive and a new service loop road;
- Provision of signage;
- Extension and augmentation of physical infrastructure / utilities as required; and
- Reconfiguration of platforms and/or pathways of existing light rail stops in Darling Drive.



2.1

DIRECTOR GENERAL REQUIREMENTS | GENERAL REQUIREMENTS

The following table outlines responses to those Director General Requirements that are relevant to the scope of each individual SSDA

Key Assessment Requirements	Responses
<p>3. Built Form and Design Excellence</p> <ul style="list-style-type: none">• Address the height, bulk and scale of the proposed development within the context of the locality;• Address visual impact when viewed from the public domain and key vantage points surrounding the site;• Address design quality, with specific consideration of the overall site layout, siting and design, axis, vistas and connectivity, street activation, open spaces and edges, facades, massing, setbacks and building articulation;• Outline the strategy to ensure design excellence is achieved for the development which should include documentary evidence that the independent Design Review Panel appointed by Infrastructure NSW to oversee the design of the SICEEP project has reviewed the detailed design and their recommendations have been addressed; and• Address the Urban Design and Public Realm Guidelines, prepared by Infrastructure NSW for the SICEEP.	<ul style="list-style-type: none">• The positioning of the buildings has been designed in order to integrate the height and scale of the buildings to the surrounding context. The second story of the Exhibition Centre has been specifically located opposite the large unoccupied data centre. Refer section 13.4 of this report.• An extensive view impacts and analysis has been undertaken and included in a separate report by JBA which addresses views from within and beyond the precinct, including key vantage points. Please refer to View Impacts & Analysis JBA Report for detailed description.• The layout of the overall site has been undertaken in specific response to improving and enhancing of the precinct and its connectivity to the surrounding context. A new primary North-South connector called ‘The Boulevard’ and two East-West connectors called ‘Tumbalong Place’ and ‘Harbourside Place’ have been introduced to improve this connectivity and relate directly to Public Transport (light rail) nodes and important connectivity routes beyond the site. These connectors also contain drop off, retail, public transport connections and building entries points allocated along them to ensure their activation. Please refer to Sections 4, 7, 11, 15, 16 and 17 of this report for more detail.• The outcome has initially been the process of a competitive bid of which design quality was an important attribute in the decision making process. The project has then been subject to a series of regular design reviews by the Infrastructure NSW Design Review Panel. Refer to the EIS• The Urban Design and Public Realm Guidelines, prepared by Infrastructure NSW informed the fundamentals of the design approach. These are discussed in more detail in section 13 of this report.
<p>4. Public Domain and Urban Design</p> <ul style="list-style-type: none">• Address all aspects of the public domain such as open spaces within the precinct and footpath, road paving, cycle ways, tree planting, footway dining, public art and lighting;• Identify and analyse key pedestrian desire lines to the surrounding area and critical links to the Central Business District;• Address Water Sensitive Urban Design opportunities within the public domain and landscaping;• Address the CPTED for the design of the public domain;• Demonstrate the pedestrian circulation, accessibility and connections on site and to surrounding streets and lanes in a schematic form;• Identify important sight lines and visual connectivity to and through the site; and• Address the Urban Design and Public Realm Guidelines, prepared by Infrastructure NSW for the SICEEP.	<ul style="list-style-type: none">• All aspects of the Public Domain have been addressed comprehensively including paving material selection, plant selections and public domain furniture selections. Please refer to sections 8, 10, 11 and 12 of this report for a more detailed description.• We have identified and analysed the key pedestrian desire lines to the surrounding area and the critical links to the CBD. These links have been instrumental in determining the overall site layout positioning for the key moves of ‘The Boulevard, Tumbalong Place, Harbourside Place’ and fine grain connections. Refer to sections 8.1 and 8.5 of this report for a more detailed description of these spaces.• WSUD initiatives have been addressed in the Public Realm of the project including hard paving stormwater runoff catchment for trees. Refer to section 9 of this report for a more detailed description.• Refer to section 11.2 of this report for further detail on CPTED and the report by Harris Crime Prevention Services• Refer to section 11 of this report for further detail on connectivity• An extensive view impacts analysis has been undertaken and included in the report which addresses views from within and beyond the site boundary. Please refer to the View Impacts & Analysis JBA Report for further detail• The Urban Design and Public Realm Guidelines, prepared by Infrastructure NSW informed the fundamentals of the design approach. These are discussed in more detail in section 13 of this report.

2.1

DIRECTOR GENERAL REQUIREMENTS | SPECIFIC REQUIREMENTS

The following table outlines responses to those Director General Requirements that are relevant to the specific SSDA1 - Convention, Exhibition and Entertainment Centre and associated Public Domain

Key Assessment Requirements	Responses
<p>1. Built Form and Design Excellence</p> <ul style="list-style-type: none">• Demonstrate that the detailed design of the buildings addresses the requirements of the adopted design excellence strategy as required by general DGR 3.	<ul style="list-style-type: none">• The project has then been subject to a series of regular design reviews by the Infrastructure NSW Design Review Panel. Reviews by the Infrastructure NSW Design Review Panel since the announcement of ‘Preferred Bidder Status’ have occurred on; _18.12.12 _21.01.13 _05.02.13 _26.02.13 _24.05.13 _04.06.13 _21.06.13 Refer to section 7.6 of this report and the EIS report for further detail.
<p>2. Public Domain and Urban Design</p> <ul style="list-style-type: none">• Address the cumulative breakout/forecourt needs in terms of spatial and practical requirements for gathering;• Address the potential impacts of the IMAX redevelopment on accessibility and functionality of the adjoining public domain and parkland; and• Address opportunities for heritage interpretation within the public domain.	<ul style="list-style-type: none">• The scheme has been developed so that the all building address the public domain with significant breakout spaces around major building entries. Gathering spaces in the public domain have been design to cater for refuge spaces for individuals and small groups to large scale organised events. Refer to Section 11.2 for public engagement analysis Refer to Section 12 for event activation of the public realm• Not required to be responded too.• The design responds to heritage aspects of the site through; _the enhancement of Tumbalong Green and retention of the green’s Heritage Fig _the retention of the Woodward Fountain _the retention and relocation of significant public art works _addressing the Chinese gardens through the enhancement of the forecourt area _the acknowledgement and design referencing of pre settlement flora and geology. Refer to Section 5 of this report for acknowledgement of existing infrastructure. Refer to the Heritage and Archaeological reports for further heritage analysis.

3.

BACKGROUND

The existing convention, exhibition and entertainment centre facilities at Darling Harbour were constructed in the 1980s and have provided an excellent service for Sydney and NSW.

The facilities however have limitations in their ability to service the contemporary exhibition and convention industry which has led to a loss in events being held in Sydney.

Darling Harbour is one of the most visited public places in Australia. There is a healthy mix of international tourists, families, and people going about their business. It is a major social hub for celebrating Australian's- Australia Day, New Year's Eve, and as a live site for major sporting events.

It is a place which is truly representative of contemporary Australia, sitting within a broader precinct which includes the University of Technology Sydney, the Powerhouse Museum, Maritime Museum, Sydney Aquarium, Chinatown, the Chinese Garden of Friendship and Pyrmont/Ultimo to its west. The central business district of Sydney rises to the east, with Darling Harbour- the meeting place, in the middle.

The NSW Government considers that a precinct-wide renewal and expansion is necessary and is accordingly committed to Sydney reclaiming its position on centre stage for hosting world-class events with the creation of the SICEEP Project.

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.

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 8,500m² 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 up to 8,000 persons seated;
- Providing up to 900 hotel rooms in a hotel complex at the northern end of the Precinct (subject of separate application);
- 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 (subject of separate application);
- Renewed and upgraded public domain, including an outdoor event space for up to 25,000 people at an expanded Tumbalong Park; and
- Improved pedestrian connections facilitating legible and easy access from the city and Chinatown in the east, Ultimo/Pyrmont in the west, Quay Street and Central Station in the south, as well as integrating the proposed 'Goods Line' (Ultimo Pedestrian Network) thus drawing people between Central, Chinatown and Cockle Bay Wharf as well as east-west between Ultimo/Pyrmont and the City.



Overall SICEEP Precinct Landscape Strategy