

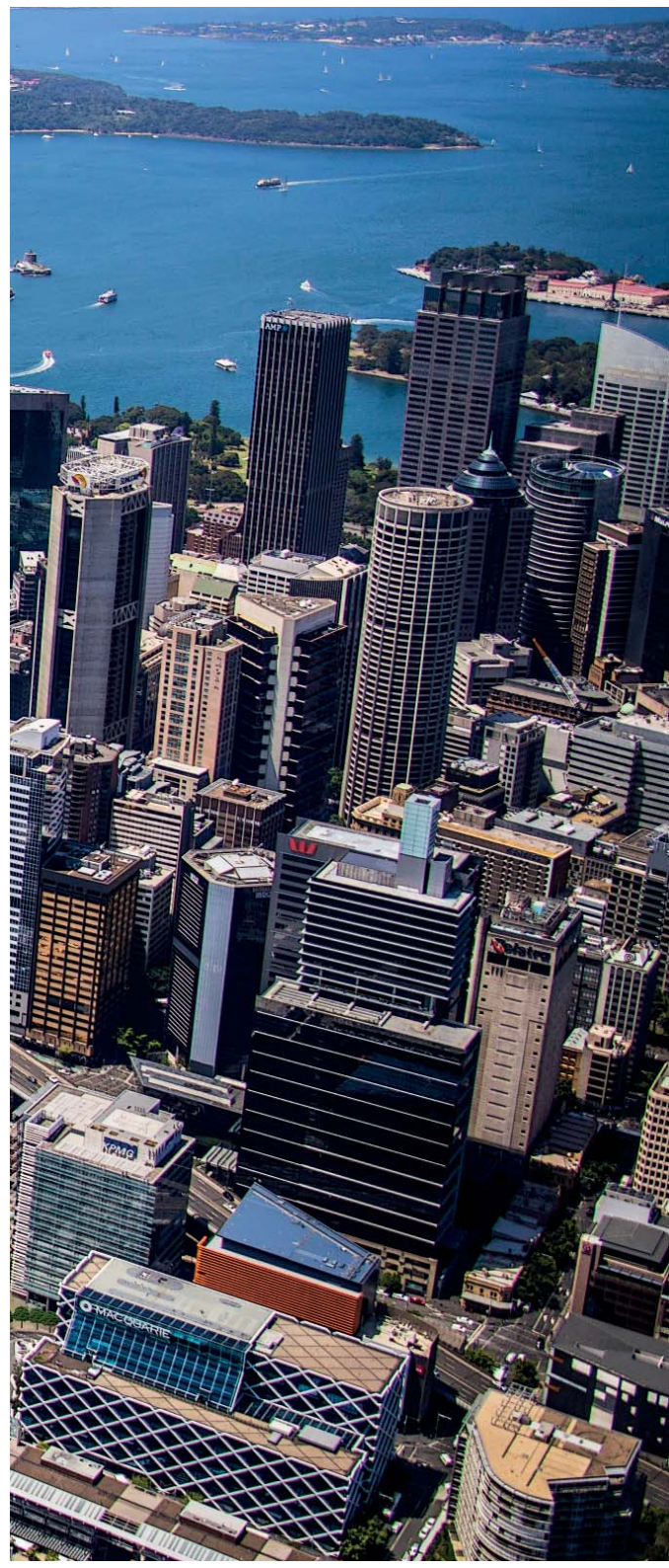
SYDNEY





RENZO PIANO BUILDING WORKSHOP

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ONE SYDNEY HARBOUR

BARANGAROO

ARCHITECTURAL DESIGN STATEMENT

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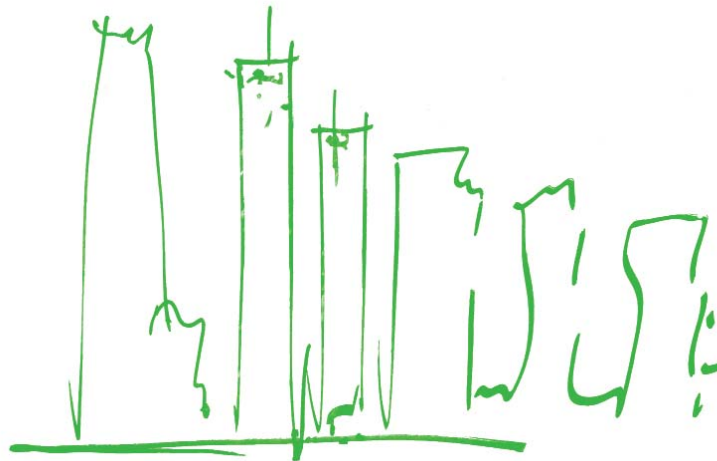


Introduction

The Renzo Piano Building Workshop (RPBW) has been appointed following an international design excellence process to create a new residential precinct within the next stage of the Barangaroo South development. This precinct, to be known as One Sydney Harbour, has been composed by the RPBW as a cluster of three buildings with staggered heights which will form an elegant addition to the Sydney skyline.

This architectural design statement illustrates the design vision and process of the RPBW team, and details the scheme proposed under three State Significant Development Applications (SSD 6964, 6965, 6966) submitted to the Minister for Planning pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The Development Applications (DA) seek approval for construction of three residential flat buildings known as R4A, R4B and R5 and associated works at Barangaroo South.

The project builds on the intent of the Concept Plan to provide residential buildings with retail uses of a high architectural calibre, that are well integrated into the public realm of the development as well as to the broader Barangaroo development context.





1.1 Design Vision

Sydney Harbour, captured in the famous David Moore photo, is a unique and beautiful example of an expansive water forged by nature. It is captivating in a constant kaleidoscopic motion of colour and sparkle, and has an extraordinary beauty that Sydneysiders gravitate to.

The harbour is at the foundation of Sydney's culture and commerce and the stage of its social and leisure life; it is part of Sydney's DNA. For One Sydney Harbour, the objective is to design a building with a gentle presence in the cityscape and in dialogue with the harbour waters and the Barangaroo waterfront. A project that Sydneysiders will embrace and see as a worthy addition to their great city.

A city development of three premium residential towers in such a location is a rare and unique opportunity. The aspiration is to create three, refined and enduring residential buildings that contain comfortable, spacious residences that make the most of the magnificent views of Sydney Harbour and its icons: the Harbour Bridge, the Sydney Opera House and the Sydney Heads.

Looking up, the proposed six kinetic north, west and eastern facing facades, across the three buildings, play with the light, alluring from every angle. The brightness of the sky will be captured, refracting the glittering Sydney light, right to the top of the buildings where the penthouse apartments and gardens merge into the sky. The result is a graceful functional design that captures and plays with light like harbour waters in the morning sun.



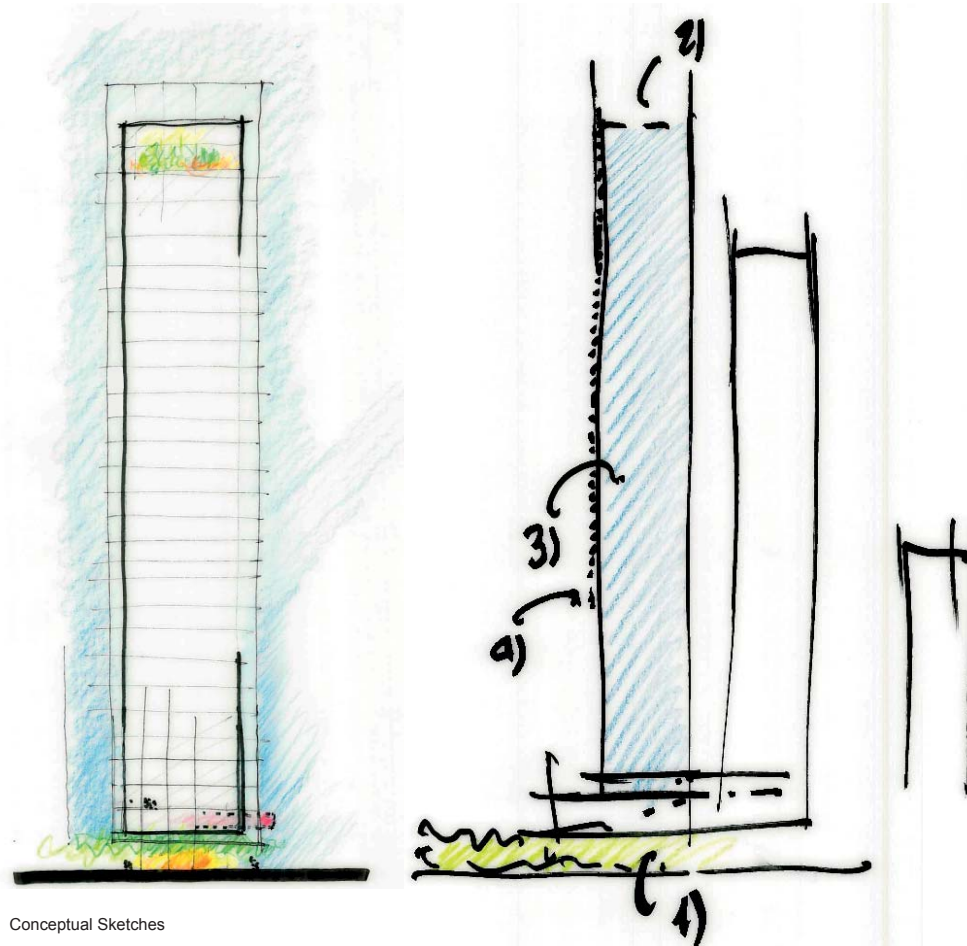
Sydney Harbour from 20,000 feet – 1992 Photograph by David Moore © Estate of David Moore



Crystalline Forms

"In our project, the objective is to design a building with a gentle presence in the cityscape and in dialogue with the harbour waters and the Barangaroo waterfront."

Renzo Piano Building Workshop



Conceptual Sketches

Deeply rooted in the architectural vision for the project is an abiding sense of responsibility towards environmental sustainability. For the common future, the objective was to maximise the use of advanced technology to underpin the sustainability initiatives. There is a careful focus on promoting natural ventilation, access to natural light, the use of photovoltaic cells and the design of high performance double-skin façades to moderate the internal environment. All of these measures are designed to reduce energy consumption and to improve the quality of life of the residents.

This precinct is vitally important for the success of the Barangaroo development. It will act as a point of transition from the intensity of the commercial centre in the south to the refreshing and generous parklands in the north, and provide a strong visual connection to Sydney Harbour and the CBD.

The three residential towers and the proposed surrounding urban context, will be a place for people that is warm, casual and inviting.

RPBW believe the vision for One Sydney Harbour will serve to inspire a more modern, responsible and poetic Sydney for all to enjoy.

1.2 Design Excellence Process

As part of the design excellence strategy for Barangaroo a worldwide search for an architectural firm with the creativity and skills to enhance Sydney's role on the global stage was conducted. The vision was to create the most desirable premium high rise apartments ever built in Australia.

RPBW was one of six of the world's leading architectural firms chosen from an original list of 25. Each firm was advised that part of the evaluation criteria for their submissions included "bold, intelligent and beautiful architecture that will stand the test of time" and "architecture that is suited to and takes advantage of its location." Significantly, these landmark apartments would share the city skyline with such icons as the Sydney Harbour Bridge and the Sydney Opera House.

The firms were issued with a formal Request for Proposal (RFP) document, which included a Project Brief and a package of information related to the project.

Preliminary design submissions were developed and workshops were held at the studios of each of the architects where initial ideas were presented and evaluated against the Project Brief.

All architects successfully submitted on or before the deadline. Their schemes were reviewed technically and a cost plan and area analysis prepared of the precinct.



Design Workshops at the Punta Nave Office in Genova





The submissions were judged upon their response to:

- Urban Planning and Design
- Residential Apartment Design
- Overall Project Vision
- Technical Response

The Selection Panel, consisting of representatives from Lendlease and the Barangaroo Delivery Authority, focused on how the architects examined the individual elements of the Project Brief and importantly how they wove them together to produce a coherent urban planning and design outcome.

The deliberations were unanimous that the submission from RPBW was a leader both architecturally and in its urban response.

The panel agreed that the submission from RPBW was the most extensive and thorough in its analysis of the Project Brief and the site context. RPBW's submission put forward ideas such as cutting through the podium profile, an important civic urban gesture, linking Watermans Cove to Hickson Park for pedestrians. Hence the team was approved to create One Sydney Harbour.



Design Workshops at the Punta Nave Office in Genova

1.3 Design Excellence RPBW

“The work of the Renzo Piano Building Workshop is characterised by its sensitive and resonant responses to genius loci and local tradition as well as by its uncontrived mix of traditional materials and techniques with those from the leading edge of technology.”

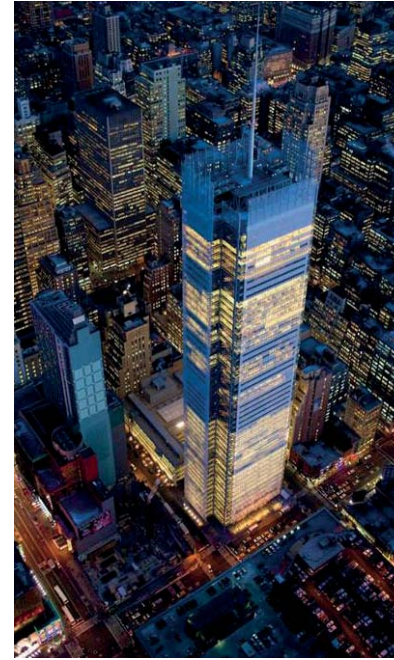
Peter Buchanan - Author

RPBW is an international architectural practice with offices in Paris, Genoa and New York City. The Workshop is led by 14 partners, including founder and Pritzker Prize laureate, architect Renzo Piano. The company permanently employs nearly 130 people from all around the world. Each is selected for their experience, enthusiasm and calibre.

The company's staff has the expertise to provide full architectural design services, from concept design stage to construction supervision. The design skills also include interior design, town planning and urban design, landscape design and exhibition design services.



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New York



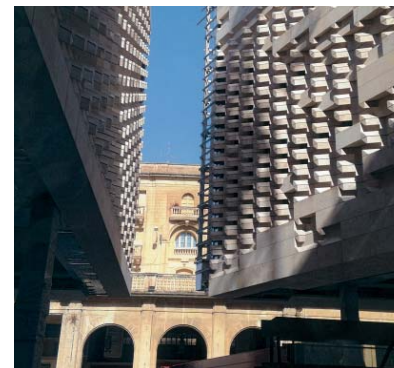
KANSAI INTERNATIONAL AIRPORT
Osaka



KANSAI INTERNATIONAL AIRPORT
Osaka



KIMBELL ART MUSEUM
Fort Worth



VILLETTA CITY GATE
Malta



CENTRE POMPIDOU BEAUBOURG
Paris



FONDATION BEYELER
Basel



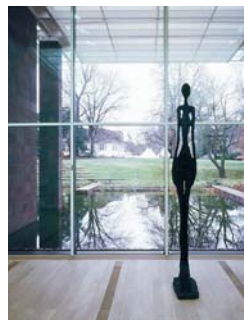
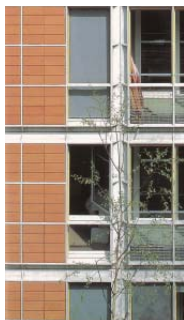
CENTRE POMPIDOU BEAUBOURG
Paris



HARVARD ART MUSEUM
Cambridge



RUE DE MEAUX HOUSING
Paris



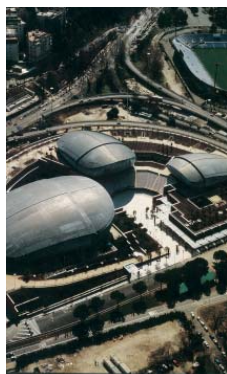
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Basel



AURORA PLACE
Sydney



ACADEMY OF SCIENCE
San Francisco



PARCO DELLA MUSICA
Rome



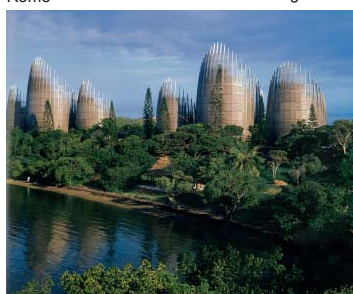
CHICAGO ART INSTITUTE
Chicago



AURORA PLACE
Sydney



ACADEMY OF SCIENCE
San Francisco



JEAN-MARIE TJIBAOU CULTURAL CENTRE
Nouméa



CHICAGO ART INSTITUTE
Chicago

RPBW's work aims to address specific features and potential of a particular situation, embracing them into the project while responding to the requirements of the program. RPBW continuously pushes the limits of building technology – innovating, refining and experimenting – to come up with the very best solution for each situation.

This method of working is highly participatory, with clients, engineers and specialist consultants all contributing from the beginning of a project and throughout the design process.

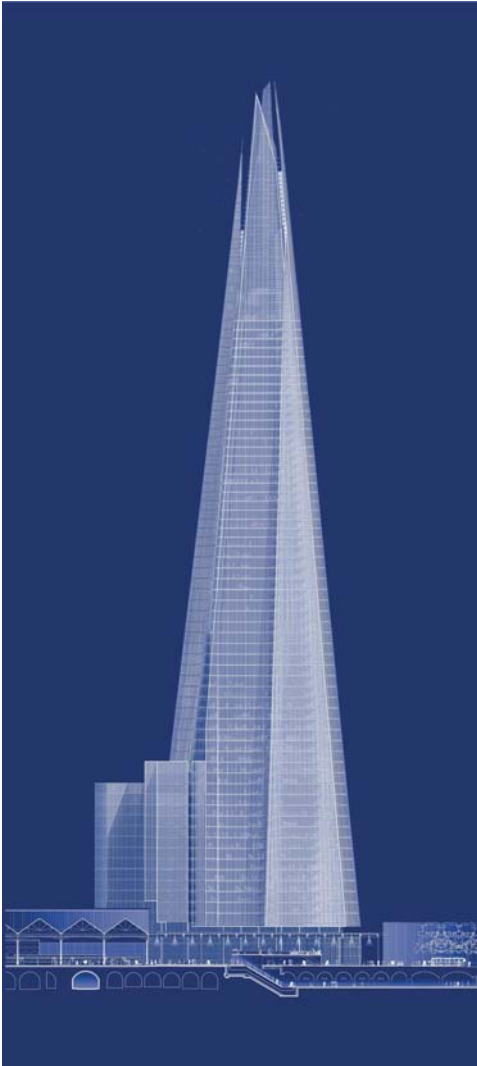
RPBW's approach to design is not strictly conventional and involves the use of physical models and full scale mock-ups to help test and develop our proposed design concepts. The team strongly believes that the design process is not linear and that it requires architects to think and draw on different scales at the same time, considering each finished detail in the development of the overall design.

Individuals within the Workshop share a common focus on technical excellence and a spirit of inquiry and experimentation. During the development of each of the Workshop's projects, emerging ideas achieve expression and refinement through a cyclical process of exploration and reflection where traditional boundaries between disciplines are minimised. This rigorous and innovative approach pervades the design process, from preliminary sketches through to final construction.

RPBW, established in 1981, is an interactive partnership that has its origins in the creative insight of the Genovese architect, Renzo Piano.

The work strives for bold solutions that are achieved through inventive use of technology, reverence for traditional materials and craftsmanship, and a deep respect for the building's specific cultural and environmental context. The Workshop aims to blend these diverse and occasionally dissonant themes in an enduring search for a new architectural voice that pays homage to the urbanity and humanity of space and form within a broader context that seeks elegance and balance while eschewing the conventional constraints of formalism.

Another of the most strongly held Workshop tenets is the crucial contribution of the link between the collective demands of the public and the personal needs of the client. The team aspires to strengthen this relationship by forging equilibrium between a particular building and its environmental context – in essence, capturing the spirit of place. Recognising and respecting the “Genius Loci” has always been one of the strongest attributes of projects completed by RPBW.



THE SHARD, London



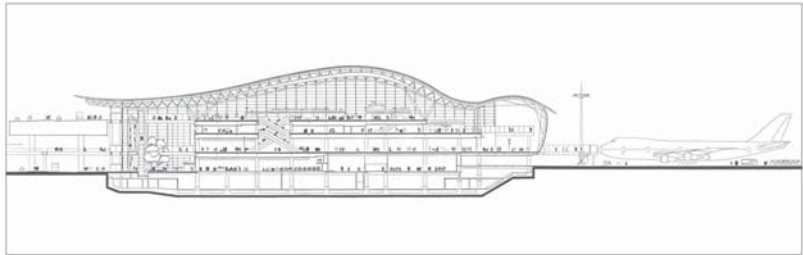
SAN PAOLO TOWER
Turin



NEW YORK TIMES BUILDING
New York



AURORA PLACE
Sydney



KANSAI INTERNATIONAL AIRPORT TERMINAL, Kansai



JEAN-MARIE TJIBAOU CULTURAL CENTRE, Nouméa

1981
Compasso d'Oro Award, Milan, Italy
AIA Honorary Fellowship, USA

1985
Legion d'Honneur Paris, France
RIBA Honorary Fellowship London, UK

1989
RIBA Royal Gold Medal for Architecture, London, UK

1990
Honorary Doctorate, Stuttgart University, Stuttgart, Germany
Kyoto Prize, Inamori Foundation, Kyoto, Japan

1992
Honorary Doctorate, Delft University, The Netherlands

1994
Goodwill Ambassador of UNESCO for Architecture

1995
Art Prize of the Akademie der Künste, Berlin, Germany
Praemium Imperiale, Tokyo, Japan
Erasmus Prize, Amsterdam, The Netherlands

1998
The Pritzker Architecture Prize

2000
Officer, Ordre National de la Legion d'Honneur Paris, France
Golden Lion for Lifetime Achievement, Venice, Italy

2002
Honorary Doctorate of Fine Arts, Pratt Institute New York, USA
Medaille d'or UIA (International Union of Architects) Berlin, Germany

2003
Gold Medal for Italian Architecture, Triennale of Milan, Italy

2006
Gold Medal for Italian Architecture for the High Museum of Art in Atlanta, Triennale of Milan, Italy

2008
Gold Medal, American Institute of Architects (AIA) Sonning Prize, University of Copenhagen

2011
Nonino Prize 2011 "Master of Our Time"
36th edition, Parco di Udine, Italy

2013
Senator for Life, Rome, Italy



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AURORA PLACE, Sydney



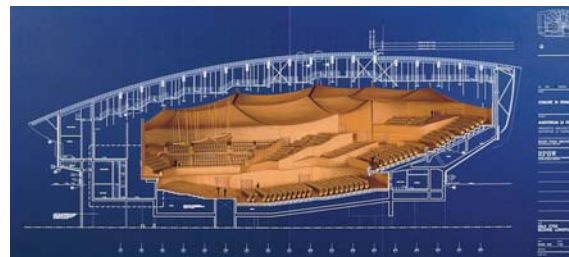
THE SHARD, London



NEW YORK TIMES BUILDING



AURORA PLACE, Sydney



PARCO DELLA MUSICA, Rome



JEAN-MARIE TJIBAOU CULTURAL CENTRE, Nouméa

The quality of the Workshop's projects has been recognised by over 70 design awards, including major distinctions from the American Institute of Architects (AIA) and the Royal Institute of British Architects (RIBA).

The Workshop has undertaken and realised over 120 projects across the world, including Europe, North America, Australasia and East Asia.

Major projects include: the Centre Georges Pompidou in Paris; the Beyeler Foundation Museum in Basel; the Rome Auditorium; the Potsdamer Platz reconstruction in Berlin, Germany; the Menil Collection in Houston, Texas; the New York Times Building in New York; the Kansai International Airport in Osaka, Japan; the Kanak Cultural Center in Nouméa, New Caledonia; the California Academy of Sciences in San Francisco; the Chicago Art Institute expansion Chicago, Illinois; the Isabella Gardner Museum in Boston; the London Bridge Tower; the Kimbell Art Museum expansion in Fort Worth, Texas and, more recently, the Harvard Art Museums renovation and expansion in Cambridge, Massachusetts as well as the new Whitney Museum of American Art in New York.

Some of the main projects in progress are: the Columbia University's Manhattanville Campus in New York City; the Stavros Niarchos Cultural Centre in Athens, the re-qualification of the ex-Falck area in Milan, the new Courthouse in Paris, the JNBY headquarters in Hangzhou in China.



2.1 Barangaroo

Barangaroo is a vital new development of Sydney's central business district and will provide extraordinary benefits for the city, the State and Australia. It is a once in a 200 year opportunity to create a bold new place to live, work and visit. It provides room for the city to grow - creating new jobs, stimulating growth and boosting our economy. It also returns this previously private industrial space to the community, including a new naturalistic harbour park.

Barangaroo will enhance Sydney's position as one of the world's most spectacular harbour cities and a must-see destination.

The site has been divided into three distinct redevelopment areas – Barangaroo Point, Central Barangaroo and Barangaroo South.

Barangaroo South - the southern 7.5 hectares of the 22 hectare former container port on the western side of the CBD - will become the greenest global residential, leisure and business precinct in the world.

The precinct will have a mix of uses, with commercial and residential buildings as well as shopping, dining, hospitality and public places. It will be a dynamic and authentic part of Sydney with Barangaroo South also aiming to be Australia's first large-scale carbon neutral community.

One Sydney Harbour is the next stage of Barangaroo South consisting of three high rise residential towers to the north of International Tower 1 (approved as "Commercial Building C3"), and to the East of the proposed Crown Sydney Hotel Resort. The One Sydney Harbour development is located on land identified in the approved Concept Plan as Block 4A and 4B.



Regional Location - The City of Sydney



The Three Towers on CBD Western fringe



Precinct Location



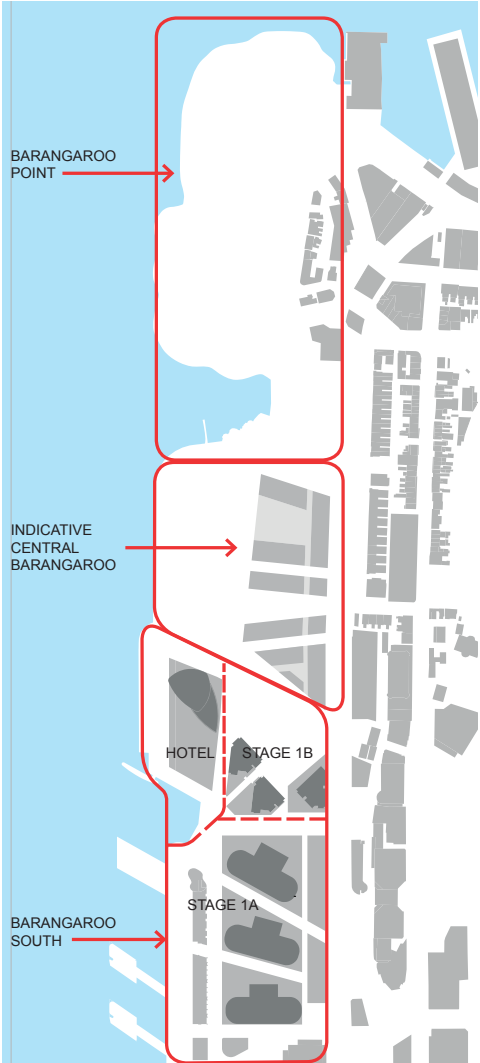
Barangaroo Point



Central Barangaroo



Barangaroo South



Key Development Sites



Barangaroo Under Construction March 2015

2.2 Masterplan and Conceptual References

Planning Principles

The One Sydney Harbour precinct is governed by the approved Barangaroo Concept Plan Mod 8. The One Sydney Harbour development is designed in accordance with the Built Form Principles and Urban Design Controls, which form part of Concept Plan (Mod 8).

The placement and form of the residential towers are designed in accordance with Built Form Principles and Urban Design Controls, such as massing, axial alignments and distribution of built form, ensuring that the buildings present a striking and complementary presence on the Sydney skyline.

The extension of the radial grid, or 'fan' Built Form Principles into the northern section of the Barangaroo South development provides a framework for the placement and orientation of the One Sydney Harbour residential towers and ensures that the precinct is seamlessly integrated with the broader development.

1. The Fan Principle

The extension of the radial grid or 'fan' into the northern section of the site provides a framework for the location of the Hotel and high-rise residential development. The fan scheme provides optimum solar access and view sharing for the buildings.

2. Framing the Key Public Spaces

The fan defines the site's key public spaces - Exchange Place and Watermans Cove are aligned with the T3 and T1 International Towers while Hickson Park is contained by the Hotel and residential development.

The buildings are located to each other on the same fan principle and provide a strong frame and address for the future streets and Hickson Road.

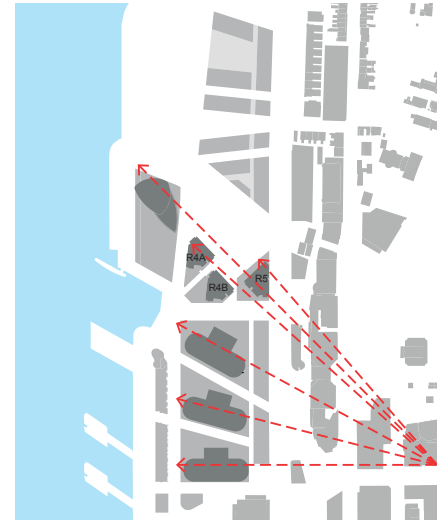
3. Bringing the Parklands to Hickson Road

The formation of Hickson Park to the north of the residential towers brings Central and Barangaroo Point to meet the eastern edge of the city and Hickson Road.

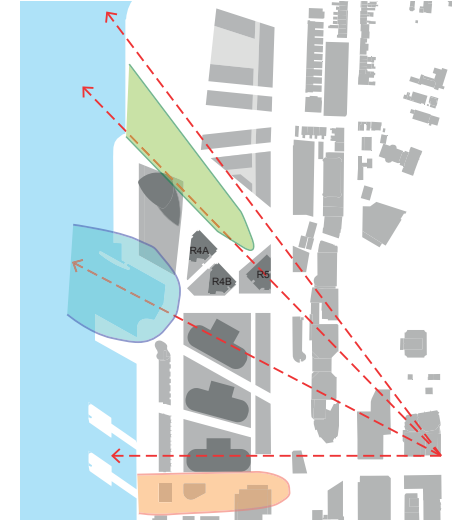
4. Engaging Routes and a Sequence of Experiences

The key spaces within Barangaroo are located at the intersections of the north-south routes and the east-west routes. This creates a sequence of varying experiences as people move through the site. Likewise Hickson Road, along with the square at The Bond and Napoleon Plaza, provides a sequence of interlinked spaces that connect Barangaroo and its waterfront to the heart of the city.

The One Sydney Harbour project will further reinforce this diagram by providing direct public links between Watermans Cove and Hickson Park.



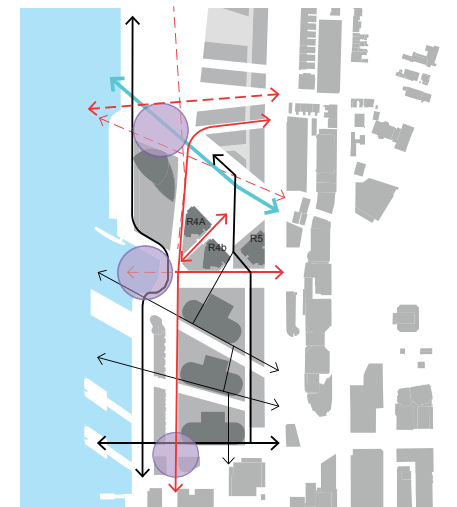
1. The Fan Principle



2. Framing the Key Public Spaces



3. Bringing the Parklands to Hickson Road



4. Engaging Routes and a Sequence of Experiences

NOTE: Barangaroo Central is Indicative



Building Placement & Interconnection with the CBD

The formation of Hickson Park to the north of the residential towers creates a green connection between the Harbour and Hickson Road. This feature draws the urban centre of Sydney towards the water's edge by creating a vital link in a series of connected public spaces leading from the city to the harbour through the parklands.

The towers occupy the southern boundaries of the site to integrate the development with the adjacent commercial buildings and to limit overshadowing of the future Hickson Park. The tower heights are articulated in a manner which creates a formal composition that visually integrates the residential development with the Crown Hotel tower to the north-east and the three commercial towers to the south. The placement of the smallest tower upon Hickson Road preserves the scale of this important street and limits overshadowing of public spaces along its length.

2.3 Site Context

The One Sydney Harbour site lies on the western side of Hickson Road, in the northern part of the Barangaroo South precinct. The complex is made of three towers named R4A, R4B and R5, located within the site boundary.

The site layout of the Concept Plan Mod 8 masterplan allows for the grouping of the residential building form towards the south and the creation of a park to the north of Barangaroo South that links the Public Domain associated with Barangaroo Point to Hickson Road and the CBD beyond, the Rocks and Darling Harbour.

The vertical towers of the Concept Plan use podiums that extend to the street to define the public domain. All three towers and podiums fit within the Barangaroo South Building Envelope Plan.

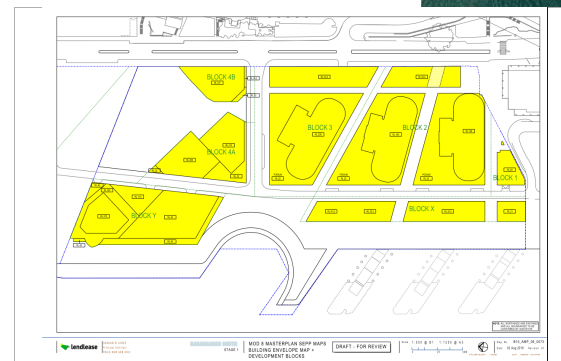
The site is located on the northern side of Watermans Quay and bounded on the north by Hickson Park that separates it from Central Barangaroo.

To the south it is defined by Watermans Quay (formerly Globe Street) which is the main vehicular route through the Barangaroo South development. These roads also provide pedestrian routes connecting the development back to the Sydney CBD.

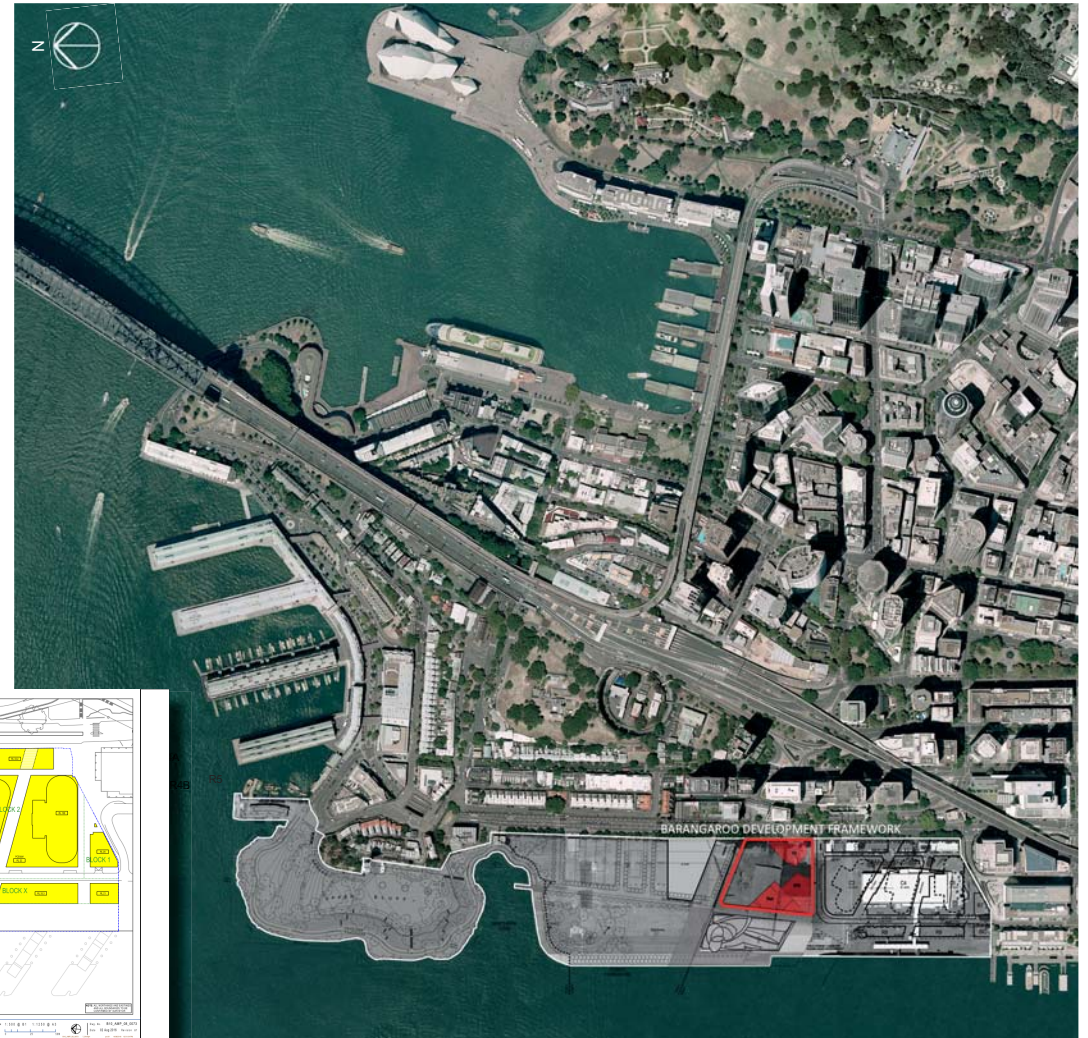
The three residential buildings sit atop a four level common basement containing car parking, storage, and services/infrastructure.

RPBW have developed a proposal that reiterates and strengthens the design objectives of the Mod 8 Concept Plan produced by Rogers, Stirk, Harbour + Partners.

All three buildings comply with the performance criteria outlined in the Built Form Principles and Urban Design Controls.



Mod 8 Masterplan Development Blocks



One Sydney Harbour Development (Stage 1B) Set in Barangaroo Aerial View Highlighted in Red



Hickson Road Aerial



Hickson Road Elevation



Hickson Road Plan

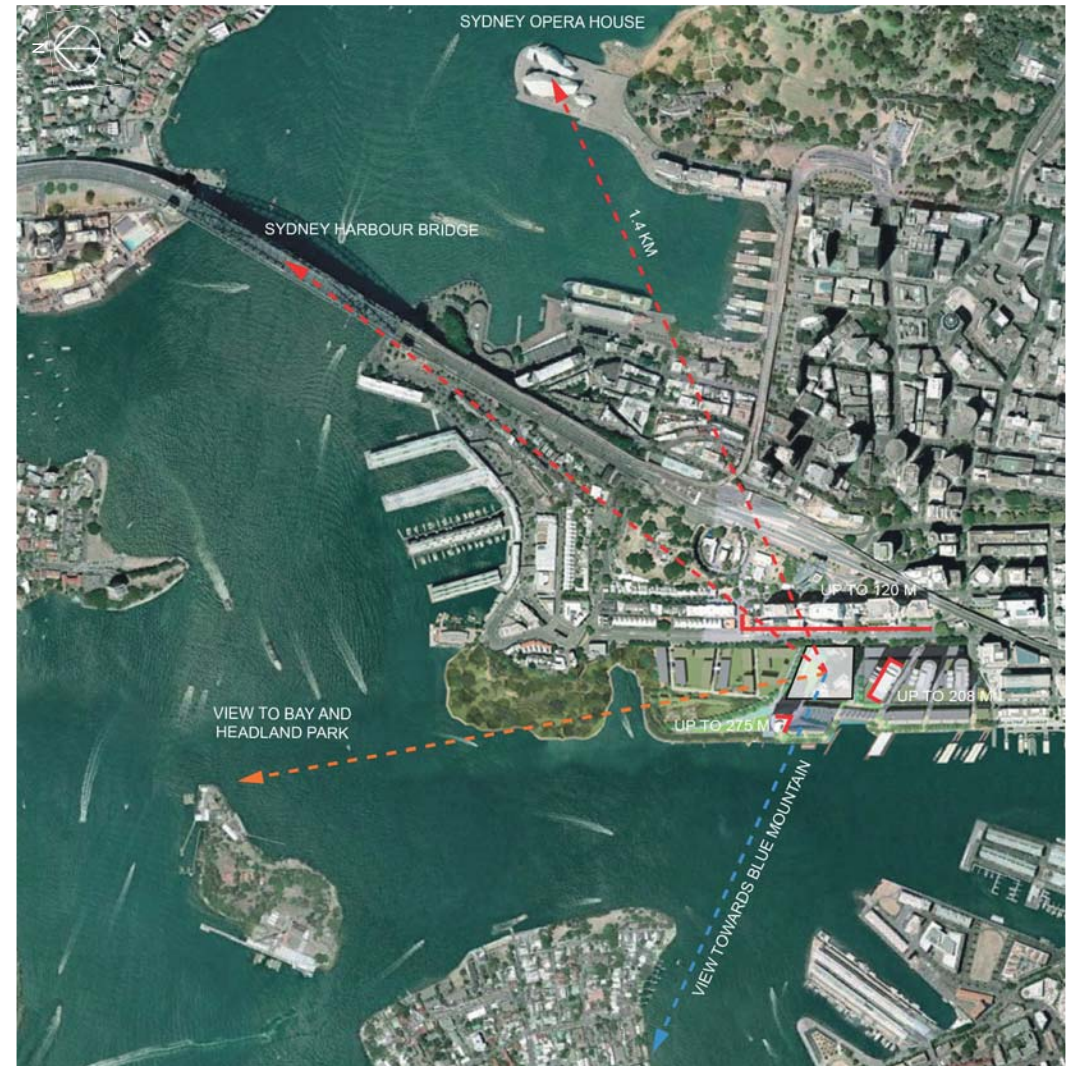
NOTE: Barangaroo Central is Indicative

The architectural language of the western fringe of the CBD is from a myriad of periods, ranging from heritage sandstone and brick buildings through to tall concrete frame and glass curtain wall structures running along Hickson Road and Kent Street. The scale of the buildings varies from low rise 2 storey buildings to larger 20 storey commercial offices.

2.4 Views

The One Sydney Harbour site offers many opportunities for views to existing and proposed new attractive elements in the urban landscape. The central location in the Sydney Harbour Basin affords panoramic views of the Sydney metropolitan, the harbour and beyond to the Blue Mountains.

A key objective of the design is to make the most of these spectacular views for future residents whilst balancing the need to share views with surrounding buildings and public areas, and conscientiously contributing to the lasting architectural image and character of Sydney.



One Sydney Harbour Opportunities from the Site



Cockatoo Island



Blue Mountains' Three Sisters



Sydney Harbour Bridge



Sydney Opera House



One Sydney Harbour Plan with Key View Orientation

NOTE: Barangaroo Central is Indicative

This series of views towards Barangaroo from key vantage points indicates both the location and urban context into which the residential towers are planned.

The extraordinary position of One Sydney Harbour will create a front row view of the natural setting of the Sydney Harbour Basin as well as becoming a new part of the city's CBD. It will contribute to the future image and character of Sydney.



Aerial View Showing Captured View Locations



Observatory Hill



Ballarat Park

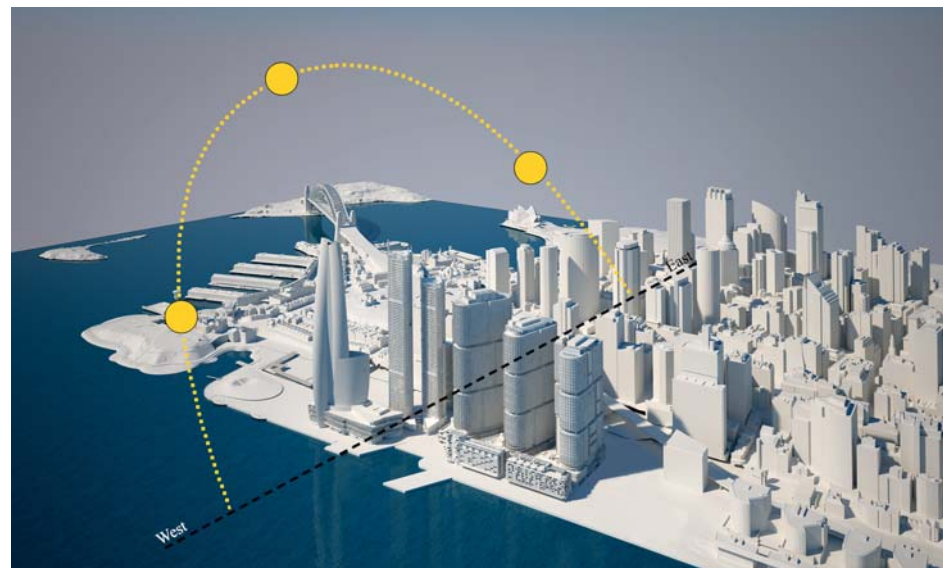
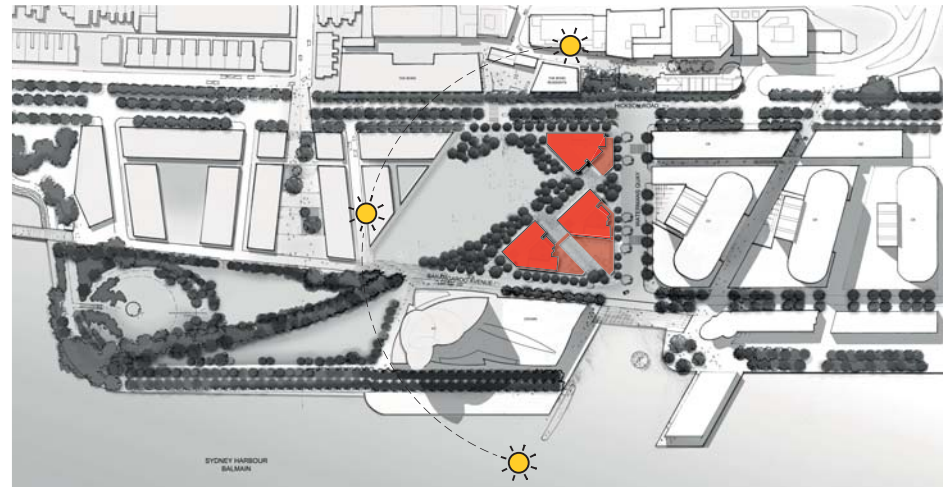


Sydney Wharf

2.5 Solar Access

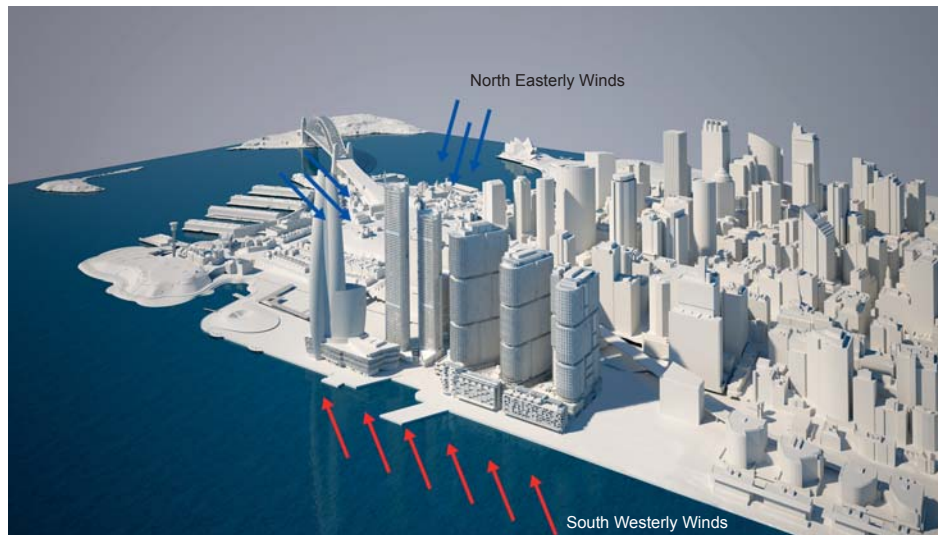
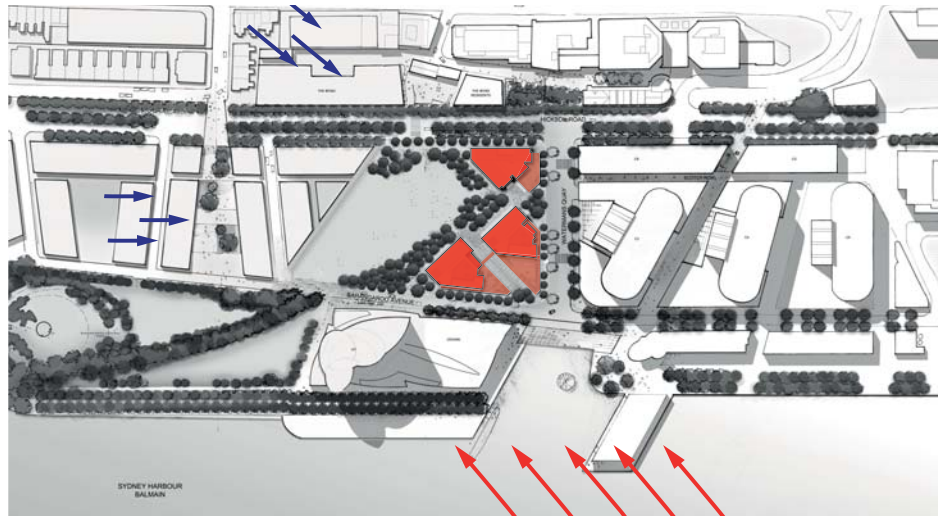
Being situated towards the northern end of Barangaroo South, and Sydney's CBD, the One Sydney Harbour buildings have excellent access to sunlight throughout the year. The existing buildings along Kent Street to the east of Barangaroo create a small amount of early morning overshadowing, however the predominant northerly and westerly aspects provide good access to sunlight for the majority of the day. The staggered east-west arrangement of the residential towers and their internal layout optimises solar exposure, while preventing adverse solar impact to the future northern park.

One Sydney Harbour does not propose south facing apartments, maximising solar access and amenity to all apartments.



One Sydney Harbour Sun Path Diagram

2.6 Wind Analysis



One Sydney Harbour Prevailing Wind Diagram

One Sydney Harbour is relatively exposed to the north-eastern and south western prevailing winds. In response, the proposed three towers will be slender and triangular in plan. The introduction of canopies at the base of the tower will mitigate “down wash” and provide greater comfort to pedestrians circulating around the buildings. In developing the design of each building, particular consideration has been given to the wind environment across the ground plane and podiums, focusing on lobbies, rooftops and the retail zones that connect directly into open space.

The project has been modelled and tested with a wind tunnel to ascertain the wind conditions and identify the methods that will ensure both residential amenity and pedestrian spaces remain comfortable and safe within the precinct.

2.7 Shadow Analysis

The siting of the towers on the southern portion of the Stage 1B site significantly optimises solar access to the northern park. The narrow triangular form of the towers minimises the impact of their shadows across the precinct.

Summer Solstice

The sun in Sydney is high during the summer months creating short shadows from the development. The parkland in front of the residential towers will be free from shadow for the majority of the day. The towers will be sited to have minimal impact on the access to light in surrounding buildings and shadow impact on public space south of the development are low.



December 21st, 10:00



December 21st, 12:00



December 21st, 15:00



Residential Towers
Building Shadows

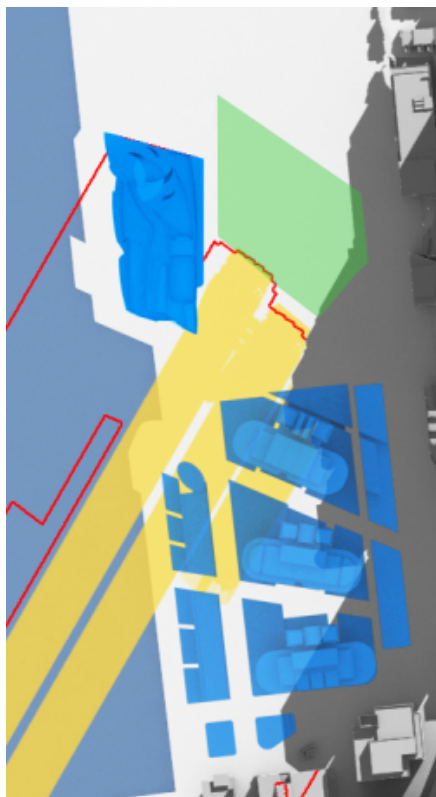


Approved Concept Plan (Mod 8)
Building Envelope Shadows

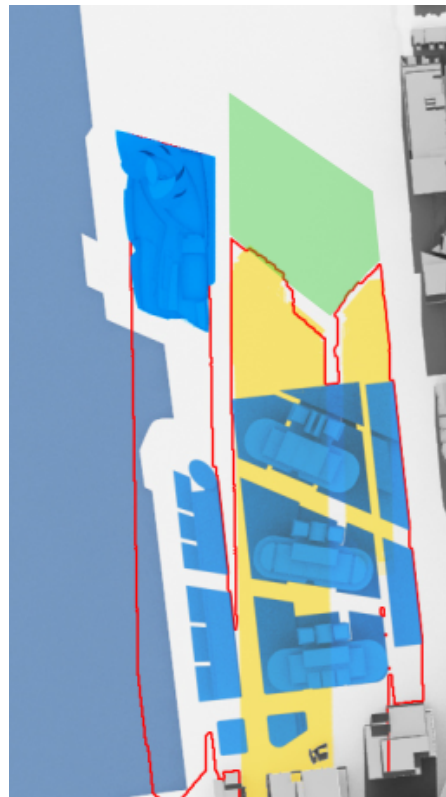


Hickson Park Extent as per approved
Concept Plan Mod 8

Note: Barangaroo Central Built Form not shown. Shadow Restricted under Concept Plan (Mod 8) Condition B3



June 21st, 10:00



June 21st, 12:00



June 21st, 15:00



Residential Towers
Building Shadows



Approved Concept Plan (Mod 8)
Building Envelope Shadows



Hickson Park Extent as per approved
Concept Plan Mod 8

Winter Solstice

The sun in Sydney is moderately low during the winter months creating longer shadows from the development. The narrow triangular plan of the towers combined with their orientation will have a low impact of shadows on the surrounding buildings and public spaces to the south of the development. Hickson Park maintains solar access even through winter solstice, due to its orientation to the north of high rise buildings.

Condition B3 of Concept Plan (Mod 8) protects solar access to Hickson Park through the following requirements:

"Hickson Park is... not to be overshadowed by built form over more than an average area of 2,500 square metres between the hours of 12:00 and 14:00 on the 21 June each year..."

Note: Barangaroo Central Built Form not shown. Shadow Restricted under Concept Plan (Mod 8) Condition B3

