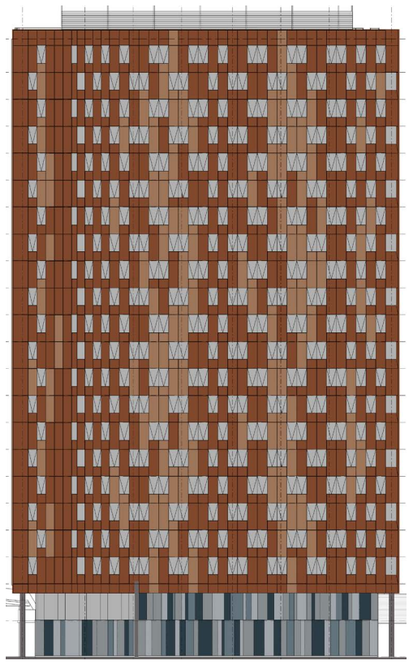
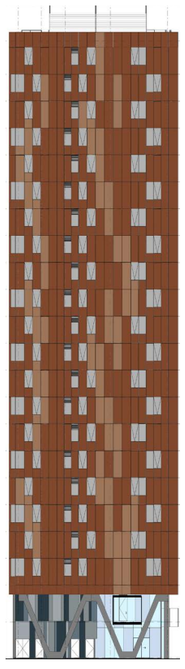
06 ARTICULATION AND FACADE

MATERIAL DEVELOPMENT - SOUTH & WEST

Rivington Place, David Adjaye (a+u David Adjaye)



Western Elevation

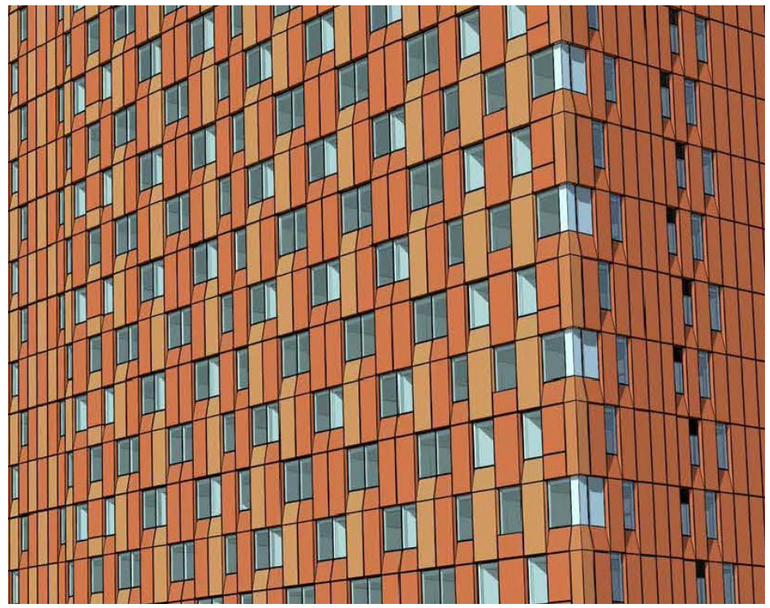


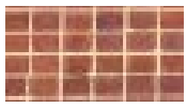
Southern Elevation

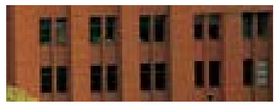
MATERIAL DEVELOPMENT -NORTH / SOUTH / WEST

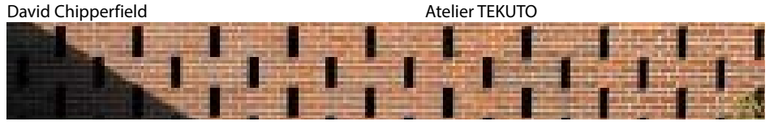
David Chipperfield

Atelier TEKUTO









The western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo. The more robust expression is also a response to the western aspect, with deep set, vertically proportioned windows providing a degree of protection from the western sun.

The patterning of windows in this façade is inspired by brick patterns in the Powerhouse's walls; the panel divisions and openings are arranged to evoke 'hit and miss' brick coursing, where every second brick is removed in each course to create simple openings.

The colour and texture of this façade references the materiality of masonry walls, in a subtly varying warm tone that shifts from darker to lighter following the varying density of the windows across the façade.

This facade appears solid and heavily textured. It contains:

- Coloured precast metal panels;
- Colourback glass to spandrels; and
- Dark grey aluminium framing to glazing.

07 ESD

07 ESD

APPROACH

The intent of this report is to outline the sustainability strategy adopted for the new W1 Building project, and demonstrate compliance with sustainability objectives set for the development.

The W1 Building development will be targeting the following sustainability objectives:

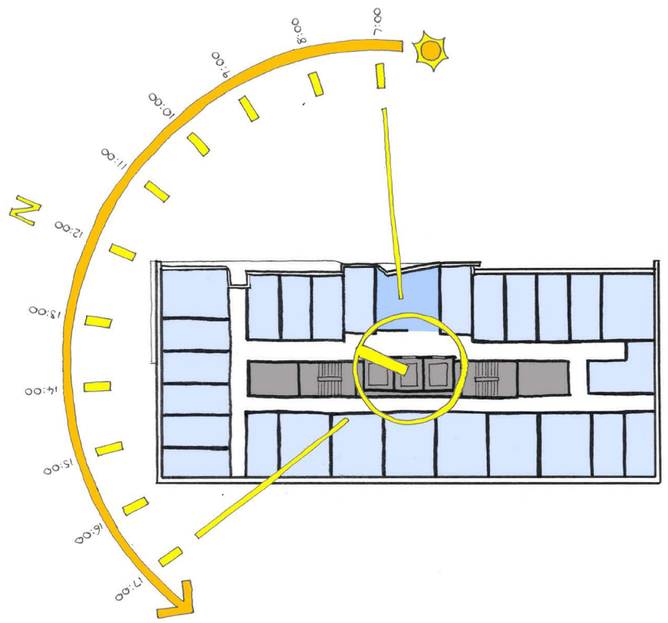
- Achieve compliance with site wide sustainability targets set in the SSDA2 Concept Proposal;
- Building Code of Australia – compliance with the requirements of Section J Energy Efficiency (mandatory); and,
- Green Star – Achievement of a self-assessed 4 star 'Australian Best Practice' Green Star Urbanest Custom As-Built certified rating.

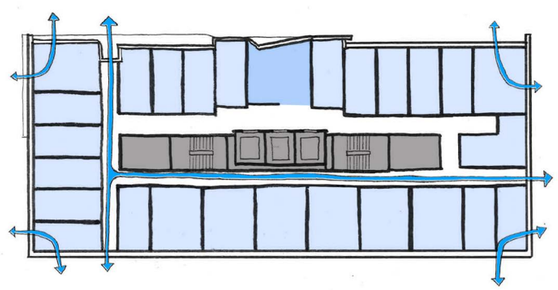
It is proposed that the project be required to provide documentation, prepared by a suitably qualified consultant indicating that the development has been designed in accordance with the principles of a 4 Star Green Star rating. Evidence of the projects consistency with Green Star Principals shall be provided to the Certifying Authority prior to the relevant Construction Certificate. This approach is consistent with approval for the adjacent W2 Student Accommodation building.

Targeting the principles of a four (4) star 'Australian Best Practice' rating under the Green Star Urbanest Custom Tool demonstrates that the environmental impact of the development has been minimised and the building design demonstrates 'Australian Best Practice' in terms of environmentally sustainable design.

Sustainability initiatives proposed for the building include, but are not limited to:

- Space efficient building floor plates;
- High quality common areas and facilities targeted at students, including a catering facility, television and games rooms, study and group and work rooms on the lower levels;
- Energy efficient heating, ventilation and air conditioning including natural ventilation to corridors;
- Water efficient building services including rainwater collection and fire system reuse
- Secure bicycle storage;
- Provision of effective waste minimisation practices to reduce all operational waste to four (4) recycling waste streams;
- Recycling of at least 80% of construction and demolition waste;
- Inclusion of integrated student learning portals;
- Dematerialisation through the use of prefabricated bathroom and kitchens; and,
- The provision of real time data on building HVAC system performance and mass transport options.





Solar Access

The site axis is about 36 degrees west of North, giving good solar access to the eastern, northern and western sides of the site. The proposal provides a minimum glazed area equal to 10% of the floor area of each room to ensure all rooms have adequate daylighting. Natural light is provided to the common corridors on the residential levels through the common rooms on the east façade and via louvres and windows at the end of each corridor on the east, west and south facades.

High performance glazing coupled with deeply recessed windows on the west facade and sunshading to the north and east facades, provides an integrated solution to shading.

Cross Ventilation

An opening area of 5% of the floor area of each room is provided to every bedroom to ensure adequate natural ventilation. All rooms are designed to have cross ventilation by utilising windows 1500mm high, refer to adjacent diagrams. Cross ventilation is provided to the common corridors on the residential levels through the common rooms on the east façade and via louvres and windows at the end of each corridor on the east, west and south facades.

The combination of integrated shading and cross ventilation will provide a more comfortable internal climate and reduce the likely use of AC within the units.

APPENDIX A

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APPENDIX A

RESPONSE TO 'URBAN DESIGN GUIDELINES'

Design review against 'Urban Design and Public Realm Guidelines', prepared by Woods Bagot for INSW, dated 17 April 2012

Sections i to iv of the above document establish scope, vision and overview only, and do not contain functional requirements, therefore no responses to these sections are provided in the table below.

APPENDIX A

RESPONSE TO 'URBAN DESIGN GUIDELINES'

	Overview and Scope		
	Provision	Assessment	Consistency
v.	CONTEXT AND DESIGN EXCELLENCE		
	Use appropriate height, alignment, form	The building form arises directly from the shape of the site, being long, narrow blocks oriented roughly northwest-southeast along the site axis. The building aligns with Darling Drive which runs along the east of the site. The building will be read in the context of Darling Square and is designed as part of this 'family' of buildings in height and form, but also in facade and material treatment.	yes
	Use materials appropriate to context	The Eastern façade will be read in the context of Darling Square and as such is designed to be part of the 'family' of buildings planned for the site. This elevation uses and responds to the established pattern and material language of the Precinct. The Western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
	Respond to existing heritage items	The Western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
	Preserve view corridors	Views from The Goods Line, and along Darling Drive maintained.	yes
	Minimise loss of solar access to public realm	Along the south-west of the site is an existing rail corridor. The public realm is located on the north and south-east of the site. There is minimal impact on the solar access to the public realm on the north however the courtyard on south is over shadowed from midday in midwinter. The Powerhouse Museum courtyard is overshadowed by the building from approximately 11pm-1pm in midwinter.	yes
	Prevent loss of privacy	Separation from the Powerhouse museum to the west is 14m from the main building, which exceeds SEPP 65 Apartment Design Guides setbacks. This gives the west facing dwellings adequate visual privacy from neighbouring buildings and open spaces. Overlooking to and from the Powerhouse Museum is not expected to compromise privacy, as occupancy patterns of the two buildings will be quite different; i.e. the Museum is in use primarily during the day when residents are most likely to be out..	yes
	Provide a new landmark	The entry to the building has been placed in the south eastern corner of the site in response to desire lines from the Goods Line and signalised crossing on the Darling Drive to Darling Square, using the central courtyard between Building W1 and W2 to the south of the site as a forecourt. The building form further responds to this location utilising a series of slender tower elements to create a marker or landmark.	yes
	Engage with pedestrians at street level	The common spaces are located on the lower floors along the Darling Drive frontage behind full height panelised glazing. The northern, eastern and southern edges of the building have been set back at lower levels to create a visual colonnade. This contributes to the creation of a pedestrian friendly environment that extends from the The Goods Line through the western side of the Precinct along Darling Drive to The Theatre, Darling Harbour and the Ian Thorpe Aquatic Centre and light rail stop north of Pier Street.	yes
	Provide a day and night presence	The building is intended for use as student accommodation therefore providing 24 hour facilities to service this use. The common areas at the ground and first floor will activate the building facade facing the courtyard and along Darling Drive day and night.	yes
	Create new connections	The building contributes to the creation of a pedestrian friendly environment that extends from The Goods Line, through the western side of the Darling Square Precinct along Darling Drive to The Theatre, Darling Harbour and the Ian Thorpe Aquatic Centre and light rail stop north of Pier Street.	yes
	Provide signature spaces	The entry to the tower is positioned at the south eastern corner off the courtyard and Darling Drive, a major pedestrian route. The building responds to this unique location by creating an address, pedestrian plaza, and threshold point.	yes

	Overview and Scope		
	Provision	Assessment	Consistency
vi	PLACE MAKING		
	Protect, conserve and Interpret Sydney heritage	The building takes cues from the surrounding context particularly textural suggestions from the industrial history of Ultimo and Pyrmont.	yes
	Provide identifiable entry and safe point to each core function	The entry is located directly from a public open space. The entry is easily legible due to it's location and its connections with all major pedestrian routes past the site assist in activating the space and providing surveillance hence increasing safety.	yes
	Create a clear identity responding to context	The facade articulation is a direct response to the varying context of the site. The East and North facades are light and reflective responding to the unique harbour environment of Sydney. The West and South facades have a heavier appearance responding to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
	Integrate links with public transport	The Goods Linelead directly to the southern end of the site; providing pedestrian access to both UTS and Central Station. Pedestrian links along Darling Drive connect to the light rail stop north of Pier Street.	yes
	New or improved pedestrian links connecting to existing	The Goods Line leads directly to the southern end of the site; providing pedestrian access to both UTS and Central Station. Pedestrian links to the south are currently along Darling Drive.	yes
	Enrich existing public realm	The entry to the building has been placed in the south eastern corner to mark the crossing point of the pedestrian routes, using the courtyard as a forecourt. The location of common facilities on the ground floor adjoining the forecourt will activate and enhance the public realm.	yes
	Seamless fit of facilities with dense urban environment	The building form, scale, and use is appropriate to it's urban context.	yes
	Ground level activation through inclusion of retail, community, or civic	The common spaces are located on the lower floors along the Darling Drive frontage behind full height panelised glazing. This clearly denotes the common floors as distinct from the residential floors above, provides protection for the building entries and contributes to an active and inviting streetscape.	yes
vii.	PUBLIC REALM		
	Reinforce the consistent building line, height, and proportion of the context	The building is designed as part of a 'family' of buildings that form Darling Square and as such the building's form and scale responds to this.	yes
	Integrate with existing or new building forms	The facade treatment and building articulation responds to the new and existing context appropriately. The East facade, facing the new precinct, is designed as part of that 'family' of buildings whilst the West facade responds to the heavier masonry warehouse structures of Pyrmont and Ultimo.	yes
	Address and respond to heritage items	The Western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
	High standards of design quality	The project is designed to a high standard with issues of context suitability, durability and sustainability inherent to it's development.	yes
	Meet current planning objectives and controls	The project is designed with reference to the relevant planning controls, the BCA, and other applicable controls.	yes
	Define and activate edges or public spaces	The common spaces are located on the lower floors along the Darling Drive frontage behind full height panelised glazing. The northern, eastern and southern edges of the building have been set back at lower levels to create a colonnade to provide some shelter for pedestrians and a threshold space for interaction along these public edges. This contributes to the creation of a pedestrian friendly environment.	yes

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RESPONSE TO 'URBAN DESIGN GUIDELINES'

	Overview and Scope		
	Provision	Assessment	Consistency
	Minimise visual, acoustic and amenity impacts on adjacent public space	Separation from the Powerhouse museum to the west is 14m from the main building, which exceeds SEPP 65 ADG setbacks. This gives the west facing dwellings adequate visual privacy from neighbouring buildings and open spaces. The existing shade structures and large tree in the Powerhouse Museum courtyard further reduce overlooking to and from the the west facing dwellings.	yes
	Maintain important views	Views from The Goods Line, and along Darling Drive maintained.	yes
	High quality landscape, seating, lighting and other elements	Refer to Apect's Landscape Drawings and Public Domain Statement (Appendix J and K).	yes
	Maintain lines of movement and sight	Views from The Goods Line and along Darling Drive are maintained	yes
	Provide summer shade and winter sunlight	Refer to Appendix G and H: Shadow diagrams for more information.	yes
	Provide ambience and a sense of place	The central courtyard is designed to provide casual sitting and waiting areas around the entry to encourage interaction and activation of the site. A range of soft and hard landscaped areas are provided for active and passive recreation. Refer to the Landscape Drawing and Public Domain Statement (Appendix J and K).	yes
01	URBAN STRUCTURE		
	Provision	Assessment	Consistency
01.1	APPRECIATING THE CONTEXT		
		The facade articulation is a direct response to the varying context of the site. The East and North facade is light and reflective responding to the unique harbour environment of Sydney. The West, and South facades have a heavier appearance responding to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
01.2	THE MOVEMENT FRAMEWORK		
	Take account of a movement assessment that has been undertaken	The Western Plot has been developed in consultation with traffic engineer and is in line with approved Concept Proposal SSDA 2.	yes
	Design for ease of walking	Across Darling Drive there is a direct link to the 'Public Square' at the heart of the Southern Precinct via the Dickson's lane between the office and residential buildings (NW and SW plots). The Goods Line leads directly to the southern end of the site; providing pedestrian access to both UTS and Central Station. Pedestrian links to the south are currently along Darling Drive. To the north and west, The Boulevard will provide a high quality pedestrian link between Haymarket, Darling Harbour and the city. Thoroughfares in accordance with approved Concept Proposal - all level changes to be gradients > 1:20	yes
	Connect with existing networks	The Goods Line leads to the southern end of the site; providing pedestrian access to both UTS and Central Station. Pedestrian links to the south are currently along Darling Drive	yes
	Integrate upper levels as well as the valley floor	Not applicable to W1 Building Development Application.	N/A
	Stitch the East, West, and the South together	Improved connectivity across the site has been implemented in line with strategy outlined in the approved SSDA2 concept design report . Refer Apect's Landscape Drawings and Public Domain Statement (Appendix J and K).	yes

01	URBAN STRUCTURE		
	Provision	Assessment	Consistency
	Make or break boundaries	The building aims to strengthen the local identity through embracing the history of the site and expressing this in the facade articulation and materials. The Eastern façade will be read in the context of Darling Square and as such is designed to be part of the 'family' of buildings planned for the site. The Western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
	Provide choice through a grid network with clear hierarchy	The building is located at a major precinct entry point and at the confluence of several movement paths - pedestrian, cycle, road, and light rail.	yes
01.3	WALKING		
	Pedestrian and cycle friendly streets	The project contributes to the creation of a pedestrian friendly environment that extends from the The Goods Line, through the western side of the precinct along Darling Drive to the Exhibition Centre, Darling Harbour and the Ian Thorpe Aquatic Centre and light rail stop north of Pier Street. A shared path along Darling Drive provides bicycle access to the site and there is secure, undercover, bicycle storage within the project.	yes
	Attractive and character rich routes	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appending J and K).	yes
	Ensure accessible routes	All public domain pedestrian areas essentially level. Gradual gradient provides disabled access to building reception.	yes
	Separate front and back of house	The entry to the tower is positioned at the south eastern corner as the meeting point for all major pedestrian routes past the site. The entry is clearly identifiable as front of house accessed from a public forecourt. Back-of house areas are located predominantly along the west of the site facing the rail corridor clearly creating front of house and back of house zones.	yes
01.4	CYCLING		
	Provide secure community parking	The site is accessible by bicycle along Darling Drive. Substantial, secure bicycle storage is located for the residents undercover within the building envelope. External bicycle racks will be provided for public use at key points around the site.	yes
01.5	PUBLIC TRANSPORT		
	Make connections for people on the bus, train, and light rail	The Goods Line provides a pedestrian connection to Central station. Pedestrian routes along Darling Drive connects to the light rail stop north of Pier Street.	yes

02	URBAN GRAIN		
	Provision	Assessment	Consistency
02.1	STREETS AND TRAFFIC		
	Ensure no vehicular traffic in pedestrianised areas	No traffic access to pedestrian areas - loading from Darling Drive only.	yes
	Make the street an address	The entrance and communal facilities face the main forecourt or Darling Drive therefore activating the street environment and providing the facilities with a street address.	yes
	Provide places not roads	Darling Drive has been relocated to create entry point space.	yes
	Put the urban space first	Public open spaces will be created by narrowing Darling Drive and the rail easement	yes

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RESPONSE TO 'URBAN DESIGN GUIDELINES'

02	URBAN GRAIN		
	Provision	Assessment	Consistency
02.2	BLOCKS DEFINED BY STREET NETWORK		
	Ensure blocks face street front	The building aligns with Darling Drive; internal planning is designed so that common facilities face the street to provide activity along this frontage.	yes
	Respect people's privacy	Refer to overlooking/privacy analysis.	yes
	Build to street alignment	The site's major address at ground level is to Darling Drive with secondary addresses to the central courtyard to the south and the pocket park to the north.	yes
	Encourage continuity of street frontage and rhythm	The building's alignment with the street means that future development northwards can continue this alignment hence further developing the street frontage and rhythm.	yes
	Keep blocks small	Block size approx. 19 x 41m	yes
	Provide for internal flexibility	Infill of block plan can be reconfigured in future, limited by encumberances such as interface with the light rail corridor.	partial
02.3	LANDMARKS, VISTAS AND FOCAL POINTS		
	Ensure a sense of arrival	Entrance to W1 is off the courtyard between W1 and W2, a similar position to W2. The entry to the southern tower(W2) is positioned at the south eastern corner as the meeting point for all major pedestrian routes past the site. The entry forecourt in this location will provide a sense of arrival for the whole South Precinct.	yes
	Make it easy to find your way around	Good sight lines and a wayfinding signage strategy will significantly improve circulation and orientation. Refer to Aspects landscape drawings and Public Domain Statement Appendix J and K.	yes
	Create interesting and identifiable skyline	The central bay of the East façade is expressed as a series of double height glazing and angled walls. Vertical blades are also helped to accentuate openings on this facade.	yes
	Provide a welcoming entrance	The entry forecourt will address the major pedestrian routes past the site and act as a hub for the student housing but also for the precinct. The internal planning locates communal facilities addressing this forecourt hence activating the space and helping to create a warm and social place.	yes
02.3	UTILITIES INFRASTRUCTURE		
	Services to be subservient to the design	The service areas are located along the western side of the building, with little perceivable impact on the overall design proposal for the user.	yes
	Services and plant hidden from front of house	The entry to the tower is positioned at the south eastern corner as the meeting point for all major pedestrian routes past the site. The entry is clearly identifiable as front of house accessed from a public forecourt. Back-of house areas are located predominantly along the west of the site facing the rail corridor clearly creating front of house and back of house zones.	yes
02.4	PARKING AND SERVICING		
	Ensure sustainable parking levels	No parking is provided.	yes
	Minimise need for service vehicles to park, queue, stop on public roads	Pick up and drop off parking / loading is provided in a separate bay on Darling Drive. For extraordinary events, such as substation maintenence, service vehicles may stand on the paved area to the north of the building, accessed off Darling Drive.	yes

03	DENSITY AND MIX		
	Provision	Assessment	Consistency
	Mixing Uses	This project is predominantly for use as student accommodation. Within this use type there are a number of supporting uses that complement the facility including communal living and dining spaces, laundry facilities, reception and informal study areas.	yes
	Include uses such as educational and recreational	Student housing is designed to support educational facilities and as such provides informal study areas. A number of communal spaces, or varying size and use, are provided for recreational purposes.	yes
	Include residential to create viable mix	The proposal is predominantly for residential use.	yes
	Activate dead edges	The location of common facilities along the facade of Darling Drive and the North and South edges of the building will create an active frontage to the pedestrian zones.	yes
	Provide a rich mix in the transition of uses	The project is designed to transition from public spaces through to semi-public and then private. This is achieved in the planning both horizontally and vertically.	yes
	Focus on links to public transport nodes	The Goods Line provides a pedestrian connection to Central Station. Pedestrian routes along Darling Drive will connect to the light rail stop north of Pier Street.	yes
03.2	DENSITY, FACILITIES AND FORM		
	Integrate with city context	The scale, facade treatment, and material choice are a direct response to the city context of the site. The building is designed to be part of a 'family' of buildings and therefore creates a cohesive city environment. Refer to approved SSDA 2 for wider precinct connections within city context.	yes
	Cater for a range of uses	Whilst the predominant use is student accommodation the proposal caters for a number of support uses including communal recreational spaces, cooking and dining facilities, laundry facilities, a gym, and administrative support.	yes
	Take a long term view	Building form allows for later replanning for other purposes / functions.	yes

04	HEIGHT AND MASSING		
	Provision	Assessment	Consistency
04.1	BUILDING SIZE AND SCALE		
	Relate building height to context	The building will be read in the context of the whole Southern Precinct and is designed as part of this 'family' of buildings in height and form.	yes
	Wrap up and step down to provide a human scale	Double height colonnade at entry brings down the scale of the built form.	yes
	Consider view sharing for neighbours	Refer to view analysis.	yes
	shallow building depths	The building depth is kept to a minimum to ensure adequate access to natural daylighting and in response to the site's which is long and narrow.	yes
	orientate for flexibility and access	The ground floor has flexibility and access to the site could be changed to any point on Darling Drive	yes
	Ensure building turns corner where streets meet	Ground and first floors respond to the street level context on all sides. Upper levels respond to various precinct-wide forms on each facade.	yes
	Provide trim and slim(narrow) building types	The building depth is kept to a minimum to ensure adequate access to natural daylighting and in response to the site's which is long and narrow.	yes

APPENDIX A

RESPONSE TO 'URBAN DESIGN GUIDELINES'

04	HEIGHT AND MASSING		
	Provision	Assessment	Consistency
04.2	BUILDING FOR CHANGE		
	Provide a mix of uses	This project is predominantly for use as student accommodation. Within this use type there are a number of supporting uses that complement the facility including communal living and dining spaces, laundry facilities, reception and informal study areas.	yes
	Provide a vertical mix of uses	The lower two floors house a number of uses to support the residential component above. These communal uses include lounge, study and dining hall to activate the street frontage. The upper, tower, levels include a laundry room, double height common spaces, study pods and combination of single and twin bedrooms all with ensuites.	yes
	Provide access for all and meet DDA requirements	The project is designed to comply with the BCA and Australian Standards in regards to access and DDA.	yes
	Reveal the history of the place	The Western façade is of a denser, heavier appearance in response to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo which highlight the industrial heritage of the area.	yes
04.3	POSITIVE OUTDOOR SPACE		
	Define the space, function and character	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	yes
	ensure right to light between buildings	Refer to Appendix G and H: Shadow Diagrams for more information.	yes
	form and shape outdoor rooms	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	yes
	use light and shadow to add dynamism	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J). A blend of deciduous and evergreen trees to be used strategically to create shade and allow light to the public realm where desired.	yes
	Avoid creating micro climate issues	Refer to wind analysis submitted with SSDA12, which confirms that wind conditions are comfortable within the courtyard due to shelter of building.	yes
04.4	BUILDING LINES AND SETBACKS		
	Build to an appropriate building line	The building form arises directly from the shape of the site, being long, narrow blocks oriented roughly northwest-southeast along the site axis. The building aligns with Darling Drive which runs along the east of the site.	yes
	setback taller sections from the street	Setbacks were not required for this plot under approved concept plan SSDA2, due to the narrow site.	yes
	Proportion building with base, middle, and top	The building is designed with a definite base, which defines the public areas at ground and first floors, and top which establishes a presence on the skyline.	yes
	Create an interface for humans at the public realm	The common spaces are located on the lower floors along the Darling Drive frontage behind full height panelised glazing. The northern, eastern and southern edges of the building have been set back at lower levels to create a colonnade to provide some shelter for pedestrians and a threshold space for interaction along these public edges. This contributes to the creation of a pedestrian friendly environment.	yes
	Create enclosure and definition to the space around and between buildings	Building mass is aligned to W2.	yes

05	PUBLIC REALM		
	Provision	Assessment	Consistency
05.1	A THRIVING PUBLIC REALM		
	Provide focus activity areas	Building entry has been located overlooking courtyard with activities spread along Darling Drive frontage.	yes

05	PUBLIC REALM		
	Provision	Assessment	Consistency
	Ensure there are appropriate uses	Common areas are located on ground and first floors.	yes
	Build in versatility and flexibility	Macarthur Place has been designed to allow future extension of Macarthur Street into the precinct.	yes
	Provide adequate routes	Site is located at confluence of several major routes.	yes
	Stimulate human sense through touch, sound, smell	Mixture of soft and hard landscaping, trees, and low planters.	yes
	Create distinct Sydney identity	The facade articulation is a direct response to the varying context of the site. The North and East facades are light and reflective responding to the unique harbour environment of Sydney. The West and South facades have a heavier appearance responding to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
	Plant local species	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	
	Enhance natural ecology	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	
	Embrace Sydney climate	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	
	Ensure built to last	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	
	Integrate art	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	
05.2	SAFETY AND SECURITY		
	Build in safety	Refer to Appendix C: CPTED response.	yes
	Focus on natural surveillance	Refer to Appendix C: CPTED response.	yes
	Secure-by-design principles	Refer to Appendix C: CPTED response.	yes
	Watch main entry	Refer to Appendix C: CPTED response.	yes
05.3	TEMPORARY USES		
	Ensure rich day and night uses	The building is intended for use as student accommodation therefore providing 24 hour facilities to service this use. The common areas at the ground and first floor will activate the building facade along Darling Drive day and night.	yes
	Provide appropriate amenity 18hr/7day	The building is intended for use as student accommodation therefore providing 24 hour facilities to service this use. The common areas at the ground and first floor will activate the building facade along Darling Drive day and night.	yes
	Diverse range of events	The design of the courtyard provides a range of spaces to support a range of uses; from sitting / meeting places to more active open areas for informal sport activities. Refer to Apect's Landscape Drawings and Public Domain Statement (Appendix J and K). The public realm around the student housing is also part of a precinct wide approach in line with the approved Concept Proposal SSDA 2, including larger events on The Boulevard and Hay Street.	yes

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RESPONSE TO 'URBAN DESIGN GUIDELINES'

05	PUBLIC REALM		
	Provision	Assessment	Consistency
	Provide different scale spaces	A variety of spaces are provided in a precinct wide approach, in line with the approved Concept Proposal SSDA 2, including larger spaces such as Darling Square, The Boulevard and Hay Street.	yes
05.4	ACCESSIBILITY		
	Connected - to public transport	Refer to Hyder report submitted with SSDA12.	yes
	Convivial	Ground floor is slightly above street level - ramp access is integral within the colonnade.	yes
	Conspicuous - lighting, surveillance, signage	Ramp access is immediately in front of the building entry. It will benefit from entry lighting 24/7.	yes
	Comfortable - landscaping, increase enjoyment	Colonnade, central courtyard and northern park equal accessible main building access which feels natural.	yes
	Convenient - direct	Colonnade, central courtyard and northern park equal accessible main building access which feels natural.	yes
	In accordance with DDA	Access to and through the building is capable of complying with the DDA.	yes

06	STREETSCAPE AND LANDSCAPE		
	Provision	Assessment	Consistency
06.1	LANDSCAPE		
	Provide variety of open space types	Mixture of hard and soft landscaping, trees and low planters, seating benches provide opportunities for active and passive recreation.	yes
	Create park life	The small lawn area within Macarthur Place, the courtyard between W1 and W2 and at the landcaped area north of W1, provide spaces for students and pedestrians to 'hang out' away from the more urban paved environments of the Darling Square Precinct.	partial
06.2	WILDLIFE AND ECOLOGY		
	Balance human access and wildlife shelter	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	
	Ensure that all sites are created as habitats	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	
	Add biodiversity	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	
06.3	MICRO CLIMATE		
	Consider influence of elements	Generous undercroft will provide weather protection around building edge and circulation spaces. Landscape materials robust and hardy.	partial
	Plant with sun in mind	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J). Shadow diagrams have helped inform layout and tree planting strategy.	yes
	Harness cool breeze	Refer to wind study submitted with SSDA12. Generous undercroft will provide weather protection around building edge and circulation spaces.	yes
	Protect from winter winds	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	
	Make the place comfortable	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	

06	STREETSCAPE AND LANDSCAPE		
	Provision	Assessment	Consistency
	Provide summer shade and winter sun	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J) and Appendix G and H: Shadow Diagrams.	
06.4	WAYFINDING		
	Legibility	Proposed layout and articulation of space significantly improves the legibility of the site. Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	yes
	Urban markers through built and landscape elements	The central bay of the East façade is expressed as a series of double height glazing and angled walls. Vertical blades are also helped to accentuate openings on this facade.	yes
	Regulatory signage	Hyder for pedestrian crossings etc.	
06.5	STREET FURNITURE, ART AND LIGHTING		
	consistent palette of street furniture	Seating and lighting are consistent with precinct. Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	yes
	include art	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J). A precinct wide approach has been adopted, in line with the approved Concept Proposal SSDA 2.	yes
	appreciation of history and site origins	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	
	illumination to create night time experience	Lighting throughout public realm. Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).	yes
	consider 'plug and play' facilities	A precinct wide approach has been adopted, in line with the approved Concept Proposal SSDA 2.	yes

07	FACADE AND INTERFACE		
	Provision	Assessment	Consistency
07.1	ANIMATING THE EDGE		
	Provide a varied and active frontage	The common spaces are located on the lower floors along the Darling Drive frontage behind full height panelised glazing. This clearly denotes the common floors as distinct from the residential floors above, provides protection for the building entries and contributes to an active and inviting streetscape.	yes
	Reach out to the street	Locating the communal facilities at the ground floor allow them to 'spill-out' onto the entry forecourt and public realm activating the space and creating a relationship between the two.	yes

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RESPONSE TO 'URBAN DESIGN GUIDELINES'

07	FACADE AND INTERFACE		
	Provision	Assessment	Consistency
	Provide a setting to the spaces between	The building will act as a distinctive marker from afar; e.g. as a visual terminus to The Goods Line, and as an urban frame for urban spaces from at closer scale e.g. courtyard and northern park.	
	Strengthen local identity	The building aims to strengthen the local identity through embracing the history of the site and expressing this in the facade articulation and materials. The Eastern façade will be read in the context of Darling Square and as such is designed to be part of the 'family' of buildings planned for the site. The Western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
	Rich design from near and far	The rhythm and reflectivity of the facade will vary depending on where viewed from. This will provide a richness to the building and the experience of moving towards it.	yes
	Express the use	The building is clearly separated into a base and an upper component. The cladding is more transparent than that on the upper floors expressing its communal, semi-public use. The upper levels in contrast are more enclosed in response to their private use as accommodation.	yes
	Relate to human scale	The clear delineation of the base as communal facilities creates a datum line reducing the perceivable scale of the building from the adjacent public buildings.	yes
	Embrace precinct identity	The Eastern façade has a direct relationship to the rest of Darling square and as such is designed to be part of the 'family' of buildings planned for the site. This elevation uses and responds to the established pattern and material language of the Precinct as follows: The façade has an overlaid feature grid pattern with faceted infill panels; these are angled so as to catch and reflect various angles of sunlight and create a shimmering effect to visually break up the bulk of the building. Materials are expressed metal profiles making up the overlaid grid pattern, metal infill panels and glass with aluminium framing within the openings. Spandrels are set in the glazing with colourback glass panels to match the windows.	yes
	Make entrances a feature	The entry forecourt will address the major pedestrian routes past the site and act as a hub for the student housing but also for the precinct. The internal planning locates communal facilities addressing this forecourt hence activating the space and helping to create a warm and social place. These lower levels are setback to provide a protected entry and identify as the entrance.	yes
	Massing and facade treatments to welcome and orientate	The facades are designed differently to respond to the varying contexts they address creating a relationship between the building and its surroundings this assists in orientation but also clearly identifies the main address.	yes
	Relate ground level to public realm	Locating the communal facilities at the ground floor allow them to 'spill-out' onto the entry forecourt and public realm activating the space and creating a relationship between the two.	yes
	Combine event strategies with permanent ground level uses	Precinct wide approach in line with the approved Concept Proposal SSDA 2.	yes
07.2	CONTINUOUS WEATHER PROTECTION		
	Provide weather protected route along primary routes	The common spaces are located on the lower floors along the Darling Drive frontage behind full height panelised glazing, set behind a colonnade of double height columns supporting the residential floors above. This clearly denotes the common floors as distinct from the residential floors above, provides protection for the building entries and contributes to an active and inviting streetscape.	yes

07	FACADE AND INTERFACE		
	Provision	Assessment	Consistency
	Use colonnades or awnings to provide consistent datum	The common spaces are located on the lower floors along the Darling Drive frontage behind full height panelised glazing, set behind a colonnade of double height columns supporting the residential floors above. This clearly denotes the common floors as distinct from the residential floors above creating a consistent datum that provides protection for the building entries and contributes to an active and inviting streetscape.	yes
	Articulation of facade	The building facade is articulated in response to its adjoining context: The East façade has an overlaid feature grid pattern with faceted infill panels; these are angled so as to catch and reflect various angles of sunlight and create a shimmering effect to visually break up the bulk of the building. This facade is designed in relation to the 'family' of buildings in Darling Square. The central bay of the East façade is expressed as a series of double height glazing and angled walls. Vertical blades are also helped to accentuate openings on this facade. The Western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo. The patterning of windows in this façade is inspired by brick patterns in the Powerhouse's walls.	yes

08	DETAILS AND MATERIALS		
	Provision	Assessment	Consistency
08.1	PRECINCT SCALE		
	Demonstrate a precinct approach to materials	The Eastern façade will be read in the context of Darling Square and as such is designed to be part of the 'family' of buildings planned for the site. This elevation uses and responds to the established pattern and material language of the Precinct as follows: The façade has an overlaid feature grid pattern with faceted infill panels; these are angled so as to catch and reflect various angles of sunlight and create a shimmering effect to visually break up the bulk of the building. Materials are expressed metal profiles making up the overlaid grid pattern, metal infill panels and glass with aluminium framing within the openings. Spandrels are set in the glazing with colourback glass panels to match the windows.	yes
	Recognise skyline is important	The central bay of the East façade is expressed as a series of double height glazing and angled walls. Vertical blades are also helped to accentuate openings on this facade.	yes
	Materials reinforce different character areas within precinct	The Eastern façade will be read in the context of Darling Square and as such is designed to be part of the 'family' of buildings planned for the site. The Western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
	Built of the same fundamental elements that make Darling Harbour the place it is.	The facade articulation is a direct response to the varying context of the site. The North and East facade are light and reflective responding to the unique harbour environment of Sydney. The West, and South facades have a heavier appearance responding to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
	Respond to surrounding context	The Western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo. Window reveals are approximately 230mm deep, a similar depth to window reveals in loadbearing brick warehouses.	yes
	Add a distinctive townscape element	The bold patterning of the facades is scaled to the appearance of the building from Harris Street, The Goods Line and Pier Street, as the building forms one edge of the Precinct.	yes
	Add another 'layer' of character into Darling Harbour	Scale and materiality of buildings represent a clear generational change from the current building stock.	yes

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RESPONSE TO 'URBAN DESIGN GUIDELINES'

08	DETAILS AND MATERIALS		
	Provision	Assessment	Consistency
08.2	PEDESTRIAN SCALE		
	Ensure resolution of detail matters	Small scale elements such as seating at the base of the colonnade 'V' columns provide a more detailed experience at pedestrian level.	yes
	Easily maintained materials	Precast concrete, lightweight cladding panels and glass are designed for ease of maintenance.	yes
	Buildings to be sustainable, durable and visually interesting	A self-assessed 4 star Greenstar rating has been targeted, durable, low maintenence materials used; design of building has high level of visual interest.	yes
	Lower base elements, in particular, to be highly durable	The lower levels are conceptually more delicate; having been revealed by peeling away the coarse outer 'skin' of the upper levels; the colours and textures of the glass and panelling are inspired by those found in the heartwood of a tree, revealed by removing the outer layer of bark.	yes
	Hierarchy of materials	The lower levels of the building are scaled to relate to human scale and are conceptually more delicate than the upper levels; as if they have been revealed by peeling away the coarse outer 'skin' of the upper levels to invite the visitor inside. The materials of this level relate to the landscape and public domain, refer to Aspect's Public Domain Statement and Landscape Drawing (Appendix J and K) for description of landscape and public domain materials.	yes
	Primary material to dominate frontage	The East façade has an overlaid feature grid pattern with faceted infill panels; these are angled so as to catch and reflect various angles of sunlight and create a shimmering effect to visually break up the bulk of the building. The patterning of windows in the West façade is inspired by brick patterns in the Powerhouse's walls; the panel divisions and openings are arranged to evoke 'hit and miss' brick coursing, where every second brick is removed in each course to create simple openings. The colour and texture of this façade references the materiality of masonry walls, in a subtly varying warm tone that shifts from darker to lighter following the varying density of the windows across the façade.	yes
	Primarily glazed along public use and retail frontages	The cladding to the lower floors is more transparent than that on the upper floors; allowing the public spaces to be clearly visible, allowing visual connections from the inside of the building to the street and contributing to an active streetscape.	yes
	Respond to climate	Refer to Apect's Landscape Drawings and Public Domain Statement (Appendix J and K).	yes
	Use colour to add vibrancy and distinctiveness	The East façade has an overlaid feature grid pattern with faceted infill panels; these are angled so as to catch and reflect various angles of sunlight and create a shimmering effect to visually break up the bulk of the building. The colour and texture of the West and South facades references the materiality of masonry walls, responding to it's context, in a subtly varying warm tone that shifts from darker to lighter following the varying density of the windows across the façade.	yes
08.3	MATERIALS		
	Consider Sydney as a blue and green connected city	The palette of materials and colours is inspired by Sydney's natural and built environment, refer to Section 6 'Articulation and Facade' of this report.	yes
	Celebrate temperate climate	Openable windows and common outdoor deck provide opportunities to enjoy outside conditions when desired.	yes
	Use landscape and plant materials	Refer to Apect's Landscape Drawings and Public Domain Statement (Appendix J and K).	

08	DETAILS AND MATERIALS		
	Provision	Assessment	Consistency
08.4	REFERENCE SKY		
	Use materials to elevate form into the sky	The central bay of the East façade is expressed as a series of double height glazing and angled walls. Vertical blades are also helped to accentuate openings on this facade.	yes
	Provide feeling of light and air	The East façade has an overlaid feature grid pattern with faceted infill panels; these are angled so as to catch and reflect various angles of sunlight and create a shimmering effect to visually break up the bulk of the building	yes
	Materials selection may include concrete, steel, glass, timber	The predominant materials include painted metal / composite panels.	yes
08.5	REFERENCE CANOPY		
	Distinguish between roofline and decks	The rooftop plantroom has a lightweight floating roof to layer the building against the sky.	yes
	Material selection may include timber, steel, foliage, native species to work with temperate climate	The predominant materials include painted metal / composite panels.	yes
08.6	REFERENCE WATER CITY		
	Materials reinforce Sydney as a harbour city	The East façade has an overlaid feature grid pattern with faceted infill panels; these are angled so as to catch and reflect various angles of sunlight and create a shimmering effect to visually break up the bulk of the building. It is intended that the shimmering effect alludes to the way light plays on water in the Harbour.	yes
	References to water courses, estuaries, rivers may be used	The East façade has an overlaid feature grid pattern with faceted infill panels; these are angled so as to catch and reflect various angles of sunlight and create a shimmering effect to visually break up the bulk of the building. It is intended that the shimmering effect alludes to the way light plays on water in the Harbour.	yes
08.7	REFERENCE BASE		
	Connect the building to the ground	Ground floor public areas will be paved to match the Precinct floor paving, to visually and materially link the public sphere with the interior public spaces.	yes
	References to weathered landscape	Colour / texture of north, west, and south facades references the weathered red brick and earthy tones of Australia	yes
	Base materials may include masonry, such as stone, brick and concrete	The base of the building is wrapped by a colonnade of concrete columns.	yes

09	ENERGY AND RESOURCE EFFICIENCY		
	Provision	Assessment	Consistency
09.1	RESOURCE EFFICIENCY		
	Orientate building towards the sun	The site axis is about 36 degrees west of North, giving good solar access to the eastern, northern and western sides of the site.	yes
	Let light in and keep heat out in summer	All habitable rooms have access to good natural daylighting. The facade systems are designed to permit winter sun but block out the hot summer sun through high performance glazing and passive sunshading to north and west.	yes
	Recycle rainwater where possible	A 30 KL rainwater tank on the ground floor will store water for toilet flushing and laundry use.	yes

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RESPONSE TO 'URBAN DESIGN GUIDELINES'

09	ENERGY AND RESOURCE EFFICIENCY		
	Provision	Assessment	Consistency
	Use potential of ground	The site is currently vacant with a monorail crossing it at high level.	yes
	work with the wind	Effective cross ventilation is provided to corridors and corner apartments occupant controlled operable windows.	yes
	Do more with less	The building is designed fror maximum efficiency in use and construction: Locating stuent housing close to major educational institutions and transport nodes, more efficient use can be made of existing land and infrastructure, as well as reducing energy use in travel. Using lightweight, insulated and durable construction reduces the total embodied energy of the building, materials handling energy use during construction and day-to-day energy use through the life of the building	yes
	waste not, want not	The student accommodation will be targeting a 20% GHG emissions reduction by achieving an 'equivalent' to the NSW Government Building Sustainability Index (BASIX) min requirements which represents to a 20% GHG emissions reduction compared to the average NSW dwelling.	yes
	Prioritise precinct wide solutions	Precinct wide approach in line with the approved Concept Proposal SSDA 2.	yes
10	STAGING AND MANAGEMENT		
	Provision	Assessment	Consistency
10.1	PRECINCT MANAGEMENT		
	Provide a platform for a range of events	Precinct wide approach in line with the approved Concept Proposal SSDA 2; The Boulevard, Darling Square and Hay Street provide adequate space for larger events	yes
	Allow the precinct to change	Change is accommodated on several levels; seasonal change is expressed through the choice of flowering or deciduous planting that changes through the year. Longer term change is provided for in the flexible planning of the block and building, allowing for uses to evolve without making current works redundant.	yes

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APPENDIX B

APPENDIX B

RESPONSE TO ‘CONCEPT PROPOSAL DESIGN PLAN REPORT’

Design review against ‘Stage 1 Concept Proposal Design Plan Report’, prepared by Denton Corker Marshall, dated March 2013

Design Guidelines		
Provision	Assessment	Consistency
EDGES + ACTIVATION		
Accommodate varied uses within the precinct including retail outlets, workplaces, casual dining (both temporary and permanent), IQ hub, lobby entrances, casual meeting space for visitors, residents and staff.	Although the W1 Building is devoted entirely to student housing, social, study and administration spaces have been located on the lower levels to provide an interface between the public and private realms and activate the street edge.	yes
Maintain lower building heights adjacent to the Square to maintain human scale, open up space and avoid overshadowing.	N/A	
Provide a 'street wall' that relates to the human scale and is in keeping with the context.	The architectural language of the lowest two levels differs from that of the upper levels to establish a 'street wall' at street level, consistent with the facade treatment and scale of the TAFE building fronting Hay Street and Darling Drive and consistent with the podium street wall expression of the new SW residential and NW commercial blocks across Darling Drive .	yes
Provide a strong sense of arrival for apartment buildings.	A four metre deep colonnade fronting a courtyard marks the entry to the building; this provides a transition zone from public to private, a sheltered entry and clear orientation point.	yes
Street frontages are to be activated with retail, commercial or residential uses where possible.	Although no retail is envisaged for the W1 Building, a variety of functions have been located on the lower levels to activate the street edge, including shop front style display apartments for marketing purposes as well as other social, study and administration spaces.	yes
Create a core of retail uses that promote active engagement around the public square	N/A	
Provide a continuous edge or recessed zone for weather protection and to mitigate residual micro-climate issues, including wind effects from tower forms above.	Apart from the colonnade at the southern entry, the northern edge has a two metre deep colonnade providing shelter to the service and secondary access on that side.	yes
Use canopies and/ or recessed facades and colonnades to create a consistent datum that provides visual continuity down the streets.	The datum established by the lowest two levels is consistent with the scale and expression of adjacent buildings, including the Powerhouse courtyard building and to the west, the Powerhouse stores building to the southwest, and the TAFE building fronting Hay Street and Darling Drive to the southeast.	yes
Introduce a physical separation (re-entrant) to visually distinguish between taller built form and urban blocks along Harbour and Hay Streets.	N/A	
Avoid creating back of house elevations – ensure the development respects and engages with all local streets and connections.	All four elevations are treated as 'front of house', with residential or common spaces located on all sides of the building. Due to restrictions on access to the light rail easement, the western facade on ground level is closed, but uses the same architectural language and materials as the other elevations.	yes
Street wall heights (above ground level) are to be as follows: 1. Street edges 16.5m – 23m 2. Boulevard + Square edge 25m – 30m 3. N Plot max 22m 4. Other > 30m	The street wall height of 70.6m is consistent with the control of >30m for "Other" locations in the precinct.	yes

APPENDIX B

RESPONSE TO 'CONCEPT PROPOSAL DESIGN PLAN REPORT'

Design Guidelines		
Provision	Assessment	Consistency
Introduce a physical separation (re-entrant) between the lower and upper levels of the building to distinguish between 'street wall' and tower built form. Do not provide if the built form does not sit upon an urban block.	The lower two levels are set back between 1.5 and 4 metres from the alignment of the upper levels, consistent with the physical separation control between the upper and lower levels.	yes
Podium level car parking should be partially 'sleeved' or concealed by podium level apartments or secondary activation uses where possible. Where this is not possible then the podium car parking facades will be 'activated' by high quality screens.	N/A	
Provide a range of uses appropriate to each street and lane which generate different footfall patterns.	A variety of functions have been located on the lower levels to activate the street edge, service and secondary access areas have been located on the northern side away from Darling Drive.	yes
Distribute residential lobbies around the site.	The main residential access is on the southern end of the site, service and secondary access areas have been located on the northern side.	yes
Retail floor to floor heights are to be a minimum of 4.5m.	Floor to floor height of the lower two levels is 4.5m.	yes
Commercial and retail buildings are to incorporate elements of visual transparency to reveal active uses.	The elevations of the lower two levels are substantially glazed.	yes
Provide minimum canopy zone of 2.5m throughout where there is no recessed ground plane. Allow a maximum 4.0m tenant awning zone to all primary streets and retail.	The provision of a recessed ground plane means no canopy zone has been provided.	yes
MASSING + BUILT FORM (ABOVE URBAN BLOCKS)	Note that these objectives and controls apply to the urban blocks; the DD site is not classified as an urban block, but compliance will be demonstrated where relevant.	yes
Consider built form and view corridors from within and across site – refer site analysis.	Refer to view analysis submitted with SSDA12.	yes
Heights of towers to vary to provide an interesting composition on the skyline – uniquely recognisable as Darling Square.	Height of tower complies with the parameter plans.	yes
Towers are to be slender in forms and should not come to ground but rise from urban blocks.	Tower is slender in form, being 16.9x40.5m. The DD block is not an urban block, therefore the tower comes to ground.	yes
Design should ensure quality architectural rooftops.	The rooftop is treated as a fifth elevation, with screening for plant areas and feature treatment of stair and lift over-runs.	yes
Maintain adequate building separation between built forms to enable view sharing.	Building separations comply with the parameter plans.	yes
Consider transitions in scale from Pumphouse building to Peak apartment tower.	The student housing buildings forms a transitional element between the residential towers in the Darling Square Precinct and Ultimo/ Pyrmont.	yes
Locate towers at key gateways to site to function as urban markers and assist wayfinding.	The tower's location at the intersection of The Goods Line, Hay St and Darling Drive marks a key entry point to Darling Square, and the building will form a recognisable landmark to assist wayfinding.	yes
Acknowledge the orientation of the site and proposed buildings – note the significance of northern and western solar loading and glare.	Western and Northern facades have deep reveals to provide shade during the middle of the day when solar load is highest.	yes

Design Guidelines		
Provision	Assessment	Consistency
Maximum building envelope must comply with the relevant parameter plans	Building envelopes comply with the parameter plans.	yes
Minimum building separation must comply with the defined parameter plans	Building separations comply with the parameter plans.	yes
Where towers exceed 40m in length the broadest face to each tower must be < 30 metres by introducing vertical recesses into the facade to visually break up the tower form.	The east and west sides of the building exceed 40m in length; the tower form has been broken up by a projecting bay facing Darling Drive.	yes
Maximum floorplate depth for all buildings must comply with the relevant parameter plans	Floorplate depth complies with the parameter plans.	yes
Built form should be located at perimeter edge of plots to maximise separation and privacy between dwellings.	Built form is located at the plot edge.	yes
RESIDENTIAL AMENITY AND PLANNING		
Towers are to be slender in form.	The building form is a slender tower, 16.9x40.5m in plan and 70m high.	yes
Building floorplates should maximise daylight and sunlight into dwellings.	The residential floor plans are arranged such that only one bedroom has a single southern orientation. The shallow floor plate allows daylight to every habitable room in the building.	yes
Building floorplates should maximise opportunity to permit cross or through ventilation into dwellings.	An opening area of 5% of the floor area of each room is provided to every bedroom to ensure adequate natural ventilation. Cross-ventilation to common areas on each residential floor is achieved through louvres and windows at the end of each corridor on the east, west and south facades.	yes
View aspect and privacy are fundamental considerations for the apartment buildings	View Aspect • The site offers views north and east to Darling Harbour and the city, west to Ultimo, Glebe and the Blue Mountains on the horizon, and south over Haymarket and along The Goods Line. The majority of bedrooms face either east or west to benefit from the best views, while living rooms are typically located on the corners to benefit from dual orientations and multiple view angles. Privacy: • The lowest two floors of the building are devoted to common areas, with the residential floors starting above this, which provides adequate visual privacy from the street. • Separation from the Powerhouse museum to the west is up to 14m from the main building, which exceeds SEPP 65 ADG setbacks. This gives the west facing dwellings adequate visual privacy from neighbouring buildings and open spaces. • Overlooking to and from the Powerhouse Museum and proposed commercial building to the north east is not expected to compromise privacy, as occupancy patterns of the buildings will be quite different; i.e. the Museum and commercial building will be in use primarily during the day when residents are most likely to be out.	yes
Ensure sense of address for residential buildings is legible at grade for residential/ visitor wayfinding.	The entry to the building is located off the courtyard and Darling Drive, at the intersection of several circulation routes and view lines through the precinct and as such is instantly recognisable and highly visible. The deep, double height colonnade at the entry creates an appropriate and amenable sense of address.	yes
Maintain generous private amenity to all dwellings in the development.	All dwellings are provided fully fitted, with a bed, desk and storage. Each has a high degree of amenity with reverse cycle air conditioning, large individually operable windows, ensuite bathrooms to every bedroom and acoustic and visual privacy from other dwellings.	yes

APPENDIX B

RESPONSE TO 'CONCEPT PROPOSAL DESIGN PLAN REPORT'

Design Guidelines		
Provision	Assessment	Consistency
Allow access for dwellings to the landscaped podium.	N/A; no podium	
Provide sufficient storage for dwellings within car park.	N/A; no car park	
Maximum development height set within proposed Parameter Plans – including rooftop plant and lift overruns.	Building height is 70.6m, including roof top plant areas and lift overrun, which complies with parameter plans.	yes
Parameter plans set maximum floorplate depth for all buildings.	Floorplate depth is 16.9m, complies with parameter plans.	yes
Consider SEPP 65 and the ADG within the design.	Consideration has been given to SEPP 65, refer to the SEPP 65 and ADG schedule.	yes
Avoid balconies located adjacent to one another or provide full height + depth screens.	N/A; no balconies	
Respond to and account for the specific specialised and multiple use requirements.	N/A	
Provide a highly efficient and functional building.	Efficiency of the building is over 80% and the internal walls are intended to be constructed using a light stud system, making the floorplate flexible in the long term.	yes
Acknowledge the orientation of the site and proposed buildings – note the significance of northern and western solar loading and glare.	The site orientation is primarily east and west; the Northern and Western facades have deep set windows to provide sun protection.	yes
Incorporate screening where appropriate to address solar or privacy impacts.	No adverse solar or privacy impacts are anticipated, refer to privacy / overlooking analysis in Section 4 - 'Design' of this report.	yes
Respond appropriately to the surrounding context including relationship to neighbours, amenities, access, identity, visibility and acoustic privacy.	The building establishes an appropriate relationship to neighbours through adequate setbacks, window orientation and material relationships described in Sections 4, 5 and 6 of this report.	yes

BUILDING ARTICULATION		
The urban blocks should adopt a fine grain that reflects and integrates with Chinatown.	The block size is consistent with the approved Concept Plan and is scaled appropriately to reflect and integrate with the existing urban grain of Ultimo.	yes
Architectural solutions with limited materials and simple details should be proposed to avoid over-articulating the façade and compromising the overall appearance.	The architectural language of the West and South facades is related to that of the massive brick warehouses found in Ultimo / Pyrmont, with a consistent material treatment across the three façades and deep-set windows. Window size is a direct relationship to the room size and type behind; starting from bedrooms, then common areas being typically fully glazed.	yes
Fenestration pattern in the towers should be varied.	The treatment of the East façade responds to the rest of the precinct and the harbour, with a panelised façade system using subtle variations in size and angle to create a dynamic visual effect akin to the play of light on water.	yes
Expression of façade should provide variety and buildings should be distinctive from one another.	The Eastern façade will be read in the context of Darling Square, and as such is designed to be part of the 'family' of buildings planned for the site. The Western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.	yes
Maximise ground level articulation to all public frontages.	The lower two levels have a consistent treatment the three elevations facing the public domain to create a unified identity for the common/public areas along the street wall. These are typically fully glazed to provide visual activation to the street and to act as a clear destination point for visitors and as a beacon to passers-by.	yes

Architectural expression shall be achieved within a nominated 500mm architectural zone (non-habitable space) – refer relevant parameter plans.	The façade of the central bay of the East elevation is within the articulation zone. The building complies with the parameter plans.	yes
Avoid creating large horizontal surfaces or ledges to minimise risk of staining or bird fouling. Streetscape façade design will provide shade and visual interest through window, wall and balcony recesses.	No large horizontal surfaces. Streetscape design is animated by colonnade columns and patterned glazing/ panelling to lower two levels.	yes
MATERIALITY		
Adopt a limited palette of materials that complement the surrounding urban fabric and historic character.	The palette of materials has been chosen to respond and complement the surrounding environment: • the West and South facades reference the masonry walls of warehouses in Ultimo / Pyrmont. The cladding pattern resembles 'hit-and-miss' Flemish bond brick work, where the headers have been removed to create a staggered pattern of openings. This pattern has been rotated through 90 degrees to give a vertical emphasis appropriate to a tower building. • The East and North façades references the play of light on water, being the harbour. The material and colour palette of the eastern façade have also been chosen with the proposed new commercial and residential buildings along Darling Drive; being panelised, colourful and contemporary in expression.	yes
Building design should not replicate existing brickwork buildings, but be a contemporary re-interpretation which contributes to the ongoing built narrative of the Darling Square redevelopment.	See above.	yes
Embodied energy should be considered in the selection of materials.	Lightweight materials, prefabricatiion and durability have been considered.	yes
Quality, long-lasting and low maintenance materials should be selected to maintain quality appearance.	Low maintenance materials are preferred by the future student housing operator to maintain the appearance and quality of the building in the long term.	yes
Utilise variation in materials, application and texture to achieve richness in architecture whilst allowing standardisation of tower forms.	The Eastern façade will be read in the context of Darling Square and as such is designed to be part of the 'family' of buildings planned for the site. The Western façade is of a denser, heavier appearance as it conceptually forms the 'city wall' of the precinct and responds to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo	yes
A greater richness in materiality and texture should be provided at the lower levels.	The common spaces are located on the lower floors along the Darling Drive frontage behind full height panelised glazing. The northern, eastern and southern edges of the building have been set back at lower levels to create a visual colonnade. This contributes to the creation of a pedestrian friendly environment that extends from the Goods Line, through the western side of the Precinct along Darling Drive to the Exhibition Centre, Darling Harbour and the Ian Thorpe Aquatic Centre and light rail stop north of Pier Street.	yes
Longevity, durability and flexibility shall be considered in the choice of materials.	Low maintenance materials are preferred by the future student housing operator to maintain the appearance and quality of the building in the long term	yes
SIGNAGE		
To ensure that the location, size, appearance and quality of all signage is appropriate and contributes to the successful place making of the precinct.	Signage has been designed to be read as an integral part of the architectural language of the facades. Colourful and dynamic signage on the glazed façade of the lower two floors will contribute to the place making around the building entry and adjacent public domain.	yes

APPENDIX B

RESPONSE TO 'CONCEPT PROPOSAL DESIGN PLAN REPORT'

To provide a consistent approach to building identification and wayfinding signage within Darling Square	Wayfinding signage will be located in the courtyard entry off Darling Drive. This signage will be part of the wayfinding suite designed for the precinct as a whole.	yes
To ensure that the precinct is legible and can be easily navigated by pedestrians and visitors.	The combination of high, mid and ground level signage makes the building easily identifiable and locatable from a variety of viewpoints.	yes
To ensure safe and enhanced pedestrian experience 24/7.	Signage on the glazed lower levels of the buildings will be designed so as not to interrupt views out or passive surveillance from the communal spaces on these levels.	yes
High level signage to be limited to a maximum height of 2 storeys.	Tower signage is arranged in narrow vertical strips which extend through three storeys; these are taller than, but much smaller in area than, the identified two storey signage zone.	yes
Content of signage shall relate to building and/or tenant identification.	The tower signage is consistent with the architectural language of the facades, being tall narrow strips that integrate with the cladding and fenestration pattern.	yes
Detailed design of signage is to be considered as part of the overall design of the building.	The lower two floors are envisaged as locations for temporary signage; for example during enrolment days or orientation weeks for TAFE and universities.	yes
Use of various forms of signage as a sleeve for the above-ground car park will be investigated.	N/A no carpark.	
All signage to be located within the zones listed below and identified on the Signage diagram :- - Entry Level and Lobby signage - Podium signage - Tower signage	Signage location is consistent with the zones identified in the parameter plans, being: • Entry level and lobby signage will be located on the glazed façade of the lower two floors behind the colonnade. The fully glazed nature of this façade offers a good 'canvas' for innovative and exciting signage strategies. No dedicated student housing signage, such as pole or banner signage, is envisaged elsewhere in the public domain. • Podium signage; although there is no podium as such, mid level signage will be located on the 2nd floor façade just above the colonnade for building identification from middle distance locations, such as along Darling Drive, Macarthur Street or down Hay Street. • Tower signage will be located in vertical strips on the top 3 floors of the tower, grouped around the corners of the building for long distance building identification.	yes
Tower signage to be limited to a maximum of 2 storeys in height.	Tower signage is integrated with the building cladding, and is arranged in narrow vertical strips which extend through up to three storeys; these are taller than, but much smaller in area than, the identified two storey signage zone, and are thus consistent with the signage objectives.	yes
Content of permanent signage shall relate to building naming/ identification.	Signage content is for the future student housing operator building identification only.	yes
Content of temporary signage within the zones identified may include for the developers branding or other advertising.	The glazed façade of the lower two floors behind the colonnade are envisaged as locations for temporary signage, for example on open days, University orientation weeks or around enrolment times. The fully glazed nature of this façade offers a good 'canvas' for innovative and exciting signage strategies.	yes
Detailed design of signage to be considered as part of the overall design of the building.	Signage has been considered as an integral part of the building where it has been applied, matching fenestration and cladding patterns as appropriate. Signage on the glazed lower levels of the buildings will be designed so as not to interrupt views out from / natural light into the communal spaces on these levels. The tower signage is consistent with the architectural language of the facades, being tall narrow strips that integrate with the cladding and fenestration pattern.	yes
SUSTAINABILITY		
Incorporate best practice passive design features, such as thermal mass, orientation and solar shading, to minimise reliance on technologies to achieve low greenhouse emissions and low energy performance.	The design has targeted a self-assessed 4 star Green Star rating, which is 'Australian Best practice' mainly through passive features, such as good building orientation, provision of high levels of natural ventilation and lighting and rainwater retention.	yes

Integrate modern energy efficient systems, technology, controls and metering to enable ease of operation and maintainability within the design.	The building will utilise energy efficient systems such as high efficiency lighting and appliances, unoccupied space shut off and an energy use readout in the foyer.	yes
Reduce the dependence on mains water by incorporating water efficient fixtures and fittings and integrating rainwater tanks throughout the precinct.	The building will utilise water efficient systems such as WELS rated fittings and appliances and rainwater harvesting and re-use to reduce potable water consumption.	yes
Incorporate Water Sensitive Urban Design elements to provide passive stormwater management as part of overall site-wide water management strategy.	The public domain has been designed to integrate WSUD principles, refer to Public Domain report submitted as part of SSDA12 for more information concerning WSUD.	yes
Incorporate material choices that reduce environmental impacts such as Cross Laminated Timber, recycled materials and materials that have low toxicity.	Materials have been selected to reduce the use of PVC throughout the building.	yes
Promote and encourage the use of pedestrian, bicycle and public transport into and from the development.	There are a variety of non-car based transport options available; bicycle parking is provided at above the Greenstar rate and there are direct connections to public transport (bus, train, ferry and light rail) within walking distance of the site. The site is within walking distance of many likely destinations and services for residents such as UTS, TAFE, Sydney University and the city. No car parking will be provided	yes
Improve the natural environment by the provision of valuable public and semi-public green space.	The courtyard provides a public green space on the doorstep, providing outdoor recreation space for residents, while Darling Drive will be planted with an avenue of trees.	yes
Achievement of the Building Sustainability Index (BASIX) Multi Dwelling Certificate.	BASIX is not applicable to this building, as it is not BCA Class 2.	N/A
Achieve a Green Building Council of Australia (GBCA) 4 Star Green Star (As Built) – Multi Unit Residential v1 Certified Rating for all residential flat buildings.	The building has targeted a self-assessed 4 star 'Australian Best Practice' Green Star Urbanest Custom As Built certified rating. As there is currently no Green Star Tool that assesses student accommodation buildings, the future student housing operator and Northrop Consulting engineers have developed the custom tool to assess the design.	yes

APPENDIX C

APPENDIX C

RESPONSE TO 'CPTED'

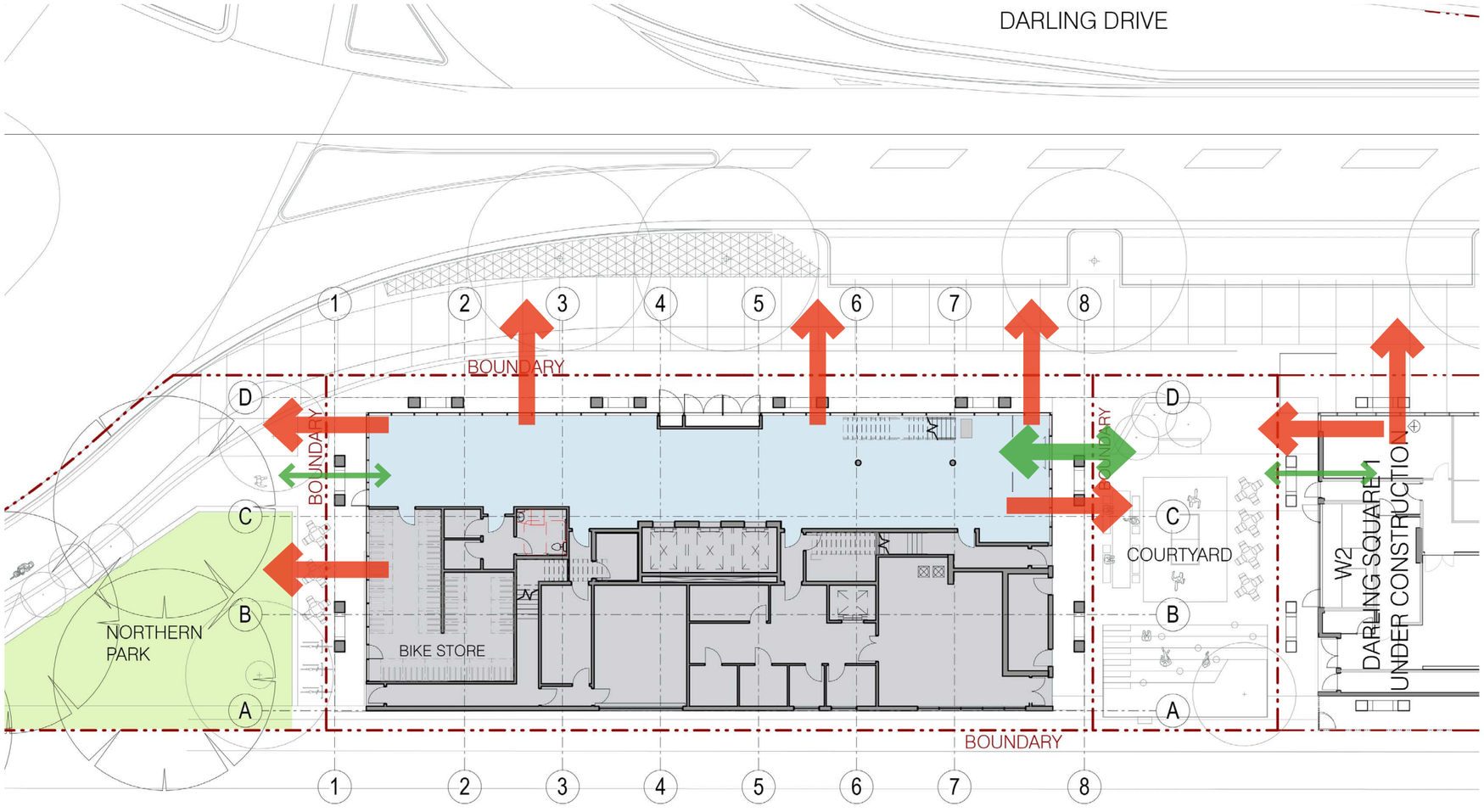
The building's location next to Darling Drive and the intersection of Darling Drive, Hay Street and the Goods Line offers opportunities and risks when considering CPTED.

	PRINCIPLES		
	Provision	Assessment	Consistency
1	TERRITORIAL DEFINITION		
	Delineation of spatial type, eg Public, semi-public, semi-private, or private emphasising invitational purpose	The building entry is raised slightly above street level, with a broad ramp and flight of steps leading up to it. This delineates the semi-public from the public realm and suggests a sitting or casual meeting place and reinforcing a sense of ownership for building users. • This entry level is connected to the central courtyard, which is bounded by a low, seat-height planter bed along the footpath side. This suggests a spatial ownership of this area, as opposed to the public footpath, as well as providing a casual sitting area comfortably raised above ground level. • At ground and first floor facing the public domain, the building is surrounded by a colonnade which subtly defines a territorial zone around the building, rather than the façade directly abutting the footpath.	yes
2	ACCESS CONTROL		
	clearly indicate directional and destination limits through use of lighting, landscaping, steps, low fences, movement corridors	• As mentioned below the colonnade establishes a subtle territory around the building; this implies that the use of space immediately around it is associated with entering / leaving the building and discourages illegitimate approach and use of the space. • Access to the light rail easement on the western side of the building is controlled by fencing for safety reasons	yes
3	SURVEILLANCE		
	Maximise surveillance increasing number, width, depth, height and length of sight lines. Natural, social and technical surveillance	• There is a direct visual and movement link between the public realm and the building entry; this allows casual surveillance of the space from passers-by and not just building users. • The courtyard will be fenced off from the light rail easement for safety reasons. A landscaped seating element and low level planting along this edge will help screen the space from the rail easement and reinforce the boundary, • The colonnade is lined on two levels with the communal spaces of the building which are accessible by residents 24/7; this provides opportunities for surveillance of the space around the building. • Reception and offices are located next to the building entry and ground floor communal space, allowing staff to monitor use and movements. A security pass is required to gain access to the building and the upper floors via the lift. • The manager's apartment is located on the second floor, overlooking the courtyard, for additional surveillance of this area.	yes
4	ACTIVITY SUPPORT	• The bike store on the northern end of the ground floor has a glazing wall facing the northern park to avoid presenting a blake wall to the public realm and increasing surveillance of the park by bike users and of the bike store by passersby.	
	Creative signage lighting, landscaping and other way-finding design. Encourage patterns of use	• As mentioned above, the public realm design encourages use of the threshold zones between public / semi-public spaces and around entry points as casual seating or gathering spaces for building users. • Activity around the ground level colonnade is supported by the communal areas along it; the colonnade will be lit at night for visual effect and to assist surveillance.	yes

APPENDIX C

RESPONSE TO 'CPTED'

	PRINCIPLES		
	Provision	Assessment	Consistency
5	TARGET HARDENING		
	Increase difficulty for offenders through physical barriers without 'fortressing'	• The Western façade at ground level is the most vulnerable to illegitimate activity, being remote from surveillance opportunities from adjacent streets, having no access points, from the buidling, fewer windows and building uses fronting it due to usage restrictions associated with the easement. Access to the railway easement area is by prior arrangement with the light rail operator. Accordingly, it has been separated from the public realm with an 1800mm high chainlink fence. • Ground floor doors are locked and accessible by security pass, in the case of the main entrance and bike parking, or key in the case of the bin room. All other service areas are accessible from the service corridor within the building only, reducing the number of possible entry points requiring security.	yes



RAILWAY EASEMENT

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APPENDIX D

AJ+C
ALLEN JACK+COTTIER

ARCHITECTURE
URBAN DESIGN
HERITAGE
INTERIORS
GRAPHICS

PRINCIPALS
& NOMINATED
ARCHITECTS (NSW)
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Architects Pty Ltd
ABN 53 003 782 250

MH/BM

14 September 2015

Department of Planning
23-33 Bridge Street
SYDNEY NSW 2000

Attn: Director-General of Planning

To whom it may concern,

RE: SICEEP THE HAYMARKET SSDA12
BUILDING W1 STUDENT ACCOMMODATION (15028)

Pursuant to Clause 50 (1A) of the Environmental Planning and Assessment Regulation 2000, I hereby declare that I am a qualified designer, which means a person registered as an architect in accordance with the Architects Act 2003 as defined by Clause 3 of the Environmental Planning and Assessment Regulation 2000.

I directed the design of the student accommodation project stated above and I confirm that the design achieves the design quality principles set out in Part 2 of the State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development.

Yours faithfully
ALLEN JACK+COTTIER

Michael Heenan
CEO, Principal, Design
Architect (NSW) 5264

ADG Rules of thumb Schedule for Project Application		
Recommendation	Detail of Recommendation	Proposal
BUILDING DEPTH		
	In general a depth of building 10-18m (glass to glass) wide is appropriate. Developments that propose wider than 18 m must demonstrate how satisfactory daylighting and natural ventilation are to be achieved.	Complies. Building depth typically 16.9m
BUILDING SEPARATION		
	Distance between buildings: Up to four storey/12m: 12m between habitable rooms/balconies 9 m between habitable/balconies and non-habitable rooms 6 m between non-habitable rooms Five to eight storeys/up to 25 metres: 18m between habitable rooms/balconies 12 m between habitable/balconies and non-habitable rooms 9 m between non-habitable rooms Nine storeys and above/ over 25 metres: 24m between habitable rooms/balconies 18 m between habitable/balconies and non-habitable rooms 12 m between non-habitable rooms	Complies. Separation from the residential and commercial buildings across Darling Drive is minimum 37m, which exceeds SEPP 65 Residential Flat Design Codes (ADG) setbacks, giving the east facing dwellings adequate visual privacy from neighbouring buildings. Separation from the Powerhouse museum (24m high at parapet) to the west is 14m from the main building, exceeds SEPP 65 ADG setbacks.
DEEP SOIL ZONES		
	A minimum of 25 percent of the open space area of the site should be a deep soil zone.	Does not comply. No deep soil zone within plot.
COMMUNAL OPEN SPACE		
	Communal open space to be 25-30% of site area	Does not comply. Communal open space provided = >9% of site area. Good access provided to adjacent public domain.
PRIVATE OPEN SPACE ON GROUND LEVEL		
	Minimum recommended area of private open space for each apartment at ground level or on a structure such as podium or carpark is 25sqm; minimum preferred dimension in one direction is 4m.	N/A No apartments on ground level.
SAFETY		
	Carry out a formal crime risk assessment for all residential development of more than 20 new dwellings	Complies. Refer to CPTED assessment.
VISUAL PRIVACY		
	To provide reasonable levels of visual privacy externally/internally during day and at night and to maximise outlook/ views from principal rooms and private open space without compromising visual privacy. Refer to Building Separation minimum standard.	Complies: Refer to building separation above and overlooking / privacy analysis.

APPENDIX D

SEPP 65 VERIFICATION

ADG Rules of thumb Schedule for Project Application		
Recommendation	Detail of Recommendation	Proposal
APARTMENT LAYOUT - SINGLE ASPECT APARTMENT		
	Single aspect apartments should be limited in depth to 8m from a window. If not, building must demonstrate a satisfactory daylighting and natural ventilation. Limit single aspect apartments with a southerly aspect (SW-SE) to max.10% of total units.	Complies. Maximum apartment depth for single aspect apartments is 7m. Percentage of single aspect south facing apartments is 4%
APARTMENT LAYOUT - KITCHEN		
	The back of a kitchen should be no more than 8m from a window. If not, building must demonstrate a satisfactory daylighting and natural ventilation.	Complies. Maximum distance from window is 6m
APARTMENT LAYOUT - CROSS-OVER APARTMENTS		
	The width of cross-over or cross-through apartments over 15 m deep should be 4m or greater to avoid deep narrow apartment layouts. If not, building must demonstrate a satisfactory daylighting and natural ventilation.	Not applicable.
APARTMENT LAYOUT - UNIT SIZES		
	Minimum unit sizes: 1 bed: 50 sqm, 2 bed: 70 sqm, 3 bed: 95sqm	Not applicable
BALCONIES		
	2m min balcony width. If alternate depth is proposed, need to demonstrate furniture layout.	Does not comply. No balconies provided to apartments typically.
CEILING HEIGHTS		
	2.7m min ceiling height in habitable areas 2.25-2.4m ceiling height in non-habitable areas	Complies. Ceiling height in habitable areas of apartments is 2.7m.
GROUND FLOOR APARTMENTS		
	Optimise the number of ground level units with separate entries. Provide ground floor apartments with access to private open space	Not applicable. No ground floor apartments.
INTERNAL CIRCULATION		
	In general, maximum 8 apartments off a double-loaded common area (except where amenity provided through crossover, dual aspect apartments)	Complies. Maximum of three apartments opening off a double loaded corridor. Natural light and ventilation provided to lift lobby and public corridor.
STORAGE		
	Minimum storage provision facilities: 1 bed: 6m3, 2 bed: 8m3; 3 bed: 10 m3. (With minimum 50% storage area located within unit)	Not applicable, no guideline for studios or student accommodation. approximately 1m3 provided per bed, all of which within the dwelling.
DAYLIGHT ACCESS		
	70% of units to receive 3 hours of direct sunlight in mid-winter to living rooms and private open spaces. In dense urban areas a minimum of 2 hours may be acceptable.	Complies. 50% of apartments receive 3 hours of direct sunlight between 9am and 3pm in midwinter. 40% recieve 2 hours of sunlight.
NATURAL VENTILATION		
	60% of units to be cross-ventilated 25% of kitchens within a development should have access to natural ventilation. Variation must demonstrate how natural ventilation can be satisfactorily achieved	Complies. All apartments achieve cross ventilation as per the Greenstar custom tool.

SEPP 65 - DESIGN PRINCIPLES STATEMENT		
	Principle	Response
1	CONTEXT	
	Good design responds and contributes to its context. Context can be defined as the key natural and built features of an area. Responding to context involves identifying the desirable elements of a location's current character or, in the case of precincts undergoing a transition, the desired future character as stated in planning and design policies. New buildings will thereby contribute to the quality and identity of the area.	Complies. The facade articulation is a direct response to the varying context of the site. The East and North facades are light and reflective responding to the unique harbour environment of Sydney. The West and South facades have a heavier appearance responding to the bulk, form and materials of the Powerhouse and other warehouse buildings in Ultimo.
2	SCALE	
	Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding buildings. Establishing an appropriate scale requires a considered response to the scale of existing development. In precincts undergoing a transition, proposed bulk and height needs to achieve the scale identified for the desired future character of the area.	Complies. The architectural language of the lowest two levels differs from that of the upper levels to establish a 'street wall' at street level, consistent with the facade treatment and scale of the TAFE building fronting Hay Street and Darling Drive and consistent with the podium street wall expression of the new SW residential block across Darling Drive.
3	BUILT FORM	
	Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building type and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.	Complies. The scale, facade treatment, and material choice are a direct response to the city context of the site. The building is designed to be part of a 'family' of buildings and therefore creates a cohesive city environment.
4	DENSITY	
	Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of units or residents). Appropriate densities are sustainable and consistent with the existing density in an area or, in precincts undergoing a transition, are consistent with the stated desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.	Complies. Conforms with parameter plans in terms of height, mass, and yield.
5	RESOURCE, ENERGY AND WATER EFFICIENCY	
	Good design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction. Sustainability is integral to the design process. Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form, passive solar design principles, efficient appliances and mechanical services, soil zones for vegetation and reuse of water.	Complies. The building has targeted a self-assessed 4 star Greenstar rating. The student accommodation will be targeting a 20% GHG emissions reduction by achieving an 'equivalent' to the NSW Government Building Sustainability Index (BASIX) min requirements which represents to a 20% GHG emissions reduction compared to the average NSW dwelling.
6	LANDSCAPE	

APPENDIX D

SEPP 65 VERIFICATION

SEPP 65 - DESIGN PRINCIPLES STATEMENT		
	Principle	Response
	Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain. Landscape design builds on the existing site's natural and cultural features in responsible and creative ways. It enhances the development's natural environmental performance by coordinating water and soil management, solar access, microclimate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighbourhood character, or desired future character. Landscape design should optimise usability, privacy and social opportunity, equitable access and respect for neighbours' amenity, and provide for practical establishment and long term management.	Refer to Aspect's Landscape Drawings and Public Domain Statement (Appendix K and J).
7	AMENITY	
	Good design provides amenity through the physical, spatial and environmental quality of a development. Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility.	Complies. The building will provide good amenity at all scales - urban, public areas and private areas. At a macro scale, the building contributes to the amenity of the city by respecting the surrounding streetscape and civic spaces, as well as providing a welcoming and engaging entry sequence leading to the common spaces on the lower levels., and up to the naturally lit and ventilated lift lobbies and corridors on the residential levels. At a general level, the building provides a variety of facilities both common; such as study rooms, communal lounge areas, a communal kitchen / dining hall and deck; and semi-private; such as smaller shared common space on each residential level. In addition, the gym in building W2 is to be shared with W1 building occupants. The management and pastoral care of residents is a major contributor to the well being of residents, with an on-site manager. At a smaller scale, each bedroom provides a high level of amenity, with good access to natural light and ventialtion, acoustic and visual privacy from within the building and from neighbouring buildings, as well as ensuite bathrooms, built-in furniture and air conditioning.
8	SAFETY AND SECURITY	
	Good design optimises safety and security, both internal to the development and for the public domain. This is achieved by maximising overlooking of public and communal spaces while maintaining internal privacy, avoiding dark and non-visible areas, maximising activity on streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private spaces.	Complies. Refer to CPTED analysis
9	SOCIAL DIMENSIONS AND HOUSING AFFORDABILITY	

SEPP 65 - DESIGN PRINCIPLES STATEMENT		
	Principle	Response
	Good design responds to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities. New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood or, in the case of precincts undergoing transition, provide for the desired future community. New developments should address housing affordability by optimising the provision of economic housing choices and providing a mix of housing types to cater for different budgets and housing needs.	Complies. The future student housing operator's demand analysis indicates there is a lack of affordable, quality student accommodation close to major educational institutions such as UTS, University of Sydney, Notre-Dame and TAFE. This building will satisfy some of this existing demand.
10	AESTHETICS	
	Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.	Complies. Aesthetics of this building arise directly from an understanding of the context and history of the site and the intended function; refer to sections 4, 5 and 6 of this report.

APPENDIX E - ARCHITECTURAL DRAWINGS

APPENDIX F - MATERIALS BOARD

APPENDIX F - MATERIALS BOARD

South & West Facades

Housing Villaverde, Madrid, Spain, David Chipperfield Architects

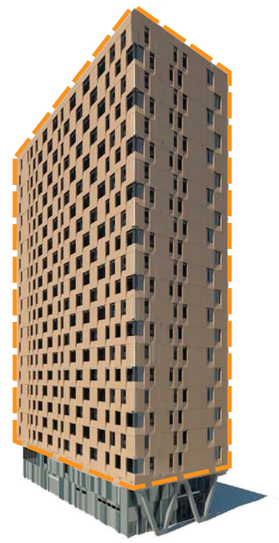
The Western Façade is a denser, heavier appearance to conceptually form the 'city wall' and responds to the bulk, form and materials of the Powerhouse and warehouse buildings in Ultimo. The robust expression is responsive to the western aspect, with deep set, vertically proportioned windows providing protection from the western sun.

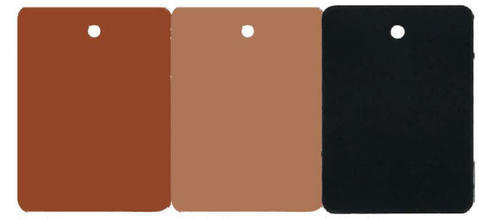
The window pattern is inspired by the brick formation of the Powerhouse; the panel divisions and openings are arranged purposefully, where every second brick is removed in each course to create simple openings.

Both colour and texture are strong references to masonry walls materiality, utilising a warm subtle varied tone, following the varying density of the windows present.

The cladding to the lower floors is more transparent, as it is a public zone. Adhereing a visual connection from the inside and out, executing an active streetscape.

- Glass - Clear, Translucent glass (pale blue), Opaque glass (pale blue)
- Light grey aluminium framing
- Metal mesh & louvres
- Charcoal columns





Pookie Bear | African Ambush | Steel Pearl Satin

Dark Grey Glass

East Facade (High)

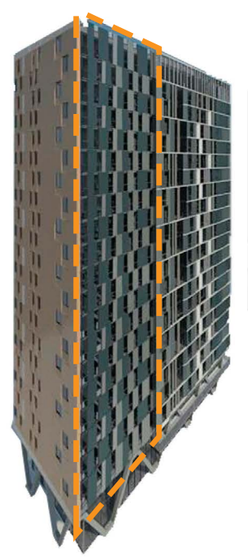
Milos Housing, Amsterdam, Netherlands, HVDN Architecten

The Eastern Façade and Northern Facades will be read in the context of the whole Southern Precinct, thus abecomes part of a 'family' of buildings on the site. The treatment of the east façade responds contextually, with a panelised façade system using subtle variations in size and angle to create a dynamic visual effect to the play of light on water, with differing shades of blue.

- The façade has an overlaid feature grid pattern with faceted infill panels; these are angled so as to catch and reflect various angles of sunlight and create a shimmering effect to visually break up the bulk of the building.
- Materials are expressed metal profiles making up the overlaid grid pattern, metal infill panels and glass with aluminium framing within the openings. Spandrels are set in the glazing with colourback glass panels to match the windows.

This façade is light in colour and reflective in nature.

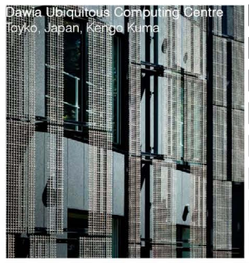
- Clear glass
- Dark grey colourback glass to spandrels
- Dark grey aluminium glazing frame
- Faceted metal panels in shades of blue and pale grey



Bright Silver (with Clear Coat) | Isolde | Blue Lights Pearl

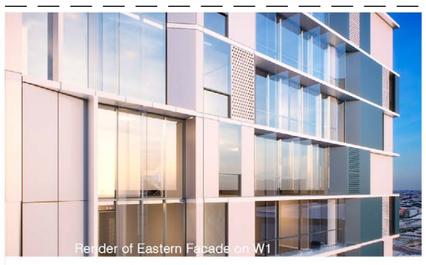
Steel Pearl Satin | Citi Pearl Matt

North-Eastern Facades



Dawia Ubiquitous Computing Centre, Toyko, Japan, Kenga Kuma

Bayuquan Theatre, Bayuquan, China, Kege Ling



Render of Eastern Façade on W1

The North-Eastern Facade is sustainability glazed tot ake advantage of views to the north-east over Tumbalong Park and Darling Harbour, and features perfortated panels and vertical and horizontal blades designed to break up the facade into vertical strips reflecting the tall, slender residential towers planned for the north-east, south-east, and south-west plots.

- Materials are light blue and metallic silver in colour

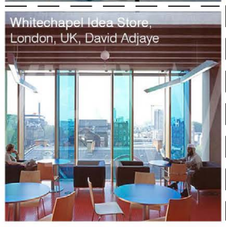
This façade is light in colour and reflective in nature.

- Clear glass
- Colourback glass to spandrels
- Silver metal aluminium glazing frame
- Silver metal louvres / perforated metal screens

Bright Silver (with Clear Coat) | Isodle | Benang

Blue Lights Pearl | Steel Pearl Satin | Citi Pearl Matt

Street Level



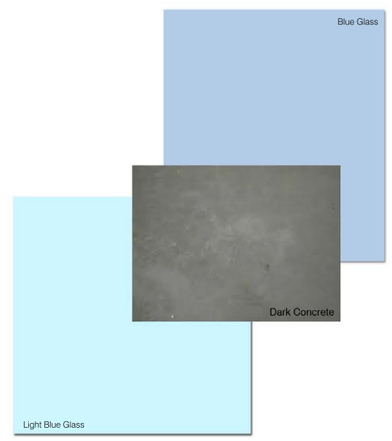
Whitechapel Idea Store, London, UK, David Adjaye

The character of the lower 2 levels responds to the functions on these levels and their relationship to the street.

This treatment extends to all three facades facing the public realm, at the lower level, expressing a relationship to the public realm on all sides and avoiding the appearance of a 'back' to any side.

The language of these facades is scaled down to reflect the human scale of the public realm. The materials are inspired by nature reflecting the trees and soft landscaping along Darling Drive and The Northern Park. The colonnade provides an interface with the public realm, modulating the spatial scale as you approach and is heroic in appearance, as if the mass of the building has been required to invite the visitor to enter the soft, light inner core of the building.

As public / common spaces they are primarily glazed to form a visual connection with the street and publicise their function.

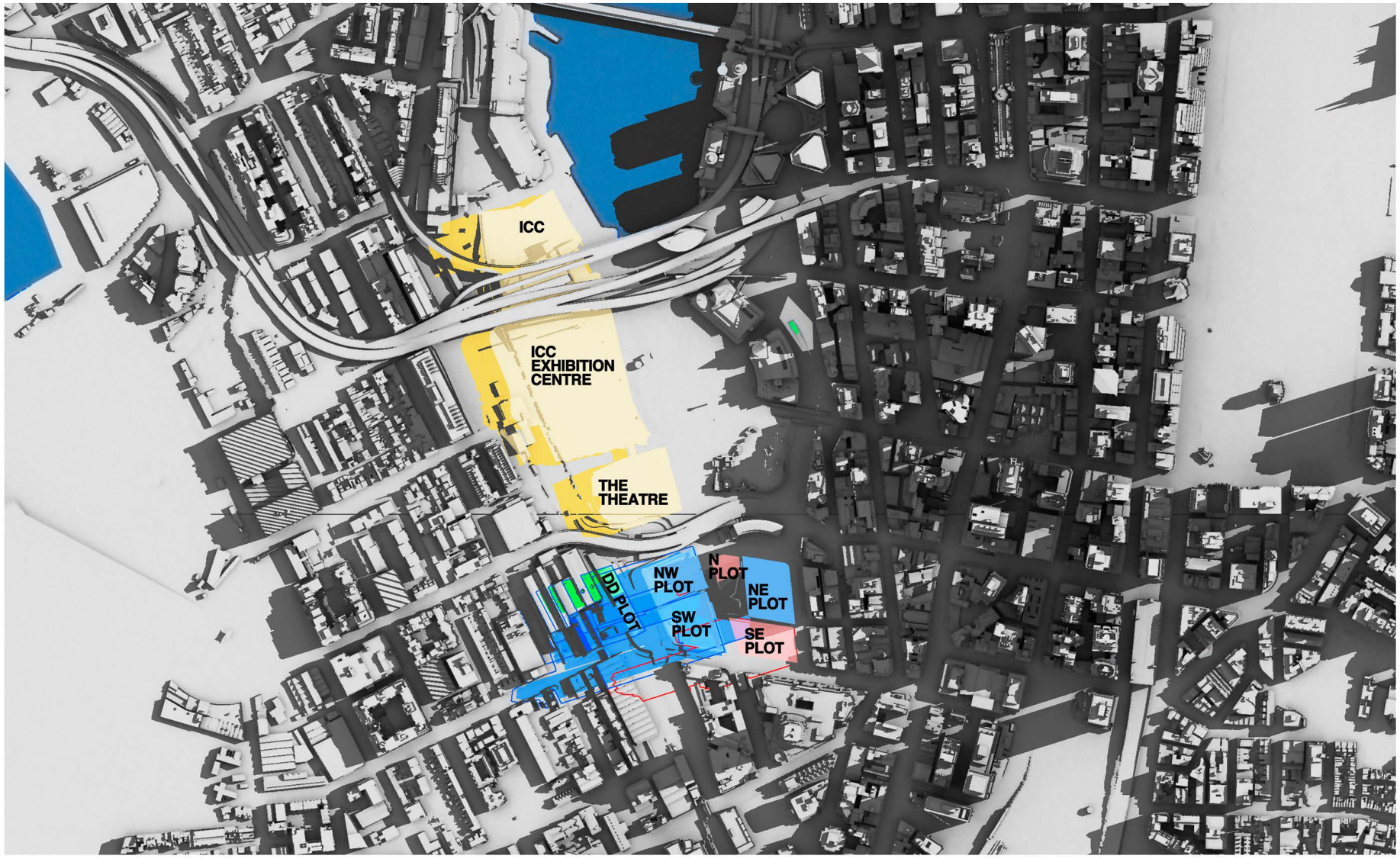


Building W1 Materials Board

A1

DARLING HARBOUR LIVE | ASPECT Studios™ | lendlease | urbanest | AJ+C Allen Jack+Cottier

APPENDIX G- SHADOW DIAGRAMS (PLAN)



SICEEP - W1 Shadow Study

21st March, 9am

Shadows cast by W1 building

Shadows cast by SSDA3, SSDA4, SSDA5 + SSDA7

Parameter plan shadow for DD, NW, SW + NE Plot

Concept proposal parameter plan shadows for N + SE plots

Shadows cast by other buildings within the SICEEP site (PPP)

Shadows cast by Existing City Buildings

SICEEP - W1 Shadow Study

21st March, 10am

Shadows cast by W1 building

Shadows cast by SSDA3, SSDA4, SSDA5 + SSDA7

Parameter plan shadow for DD, NW, SW + NE Plot

Concept proposal parameter plan shadows for N + SE plots

Shadows cast by other buildings within the SICEEP site (PPP)

Shadows cast by Existing City Buildings

SICEEP - W1 Shadow Study

21st March, 11am

Shadows cast by W1 building

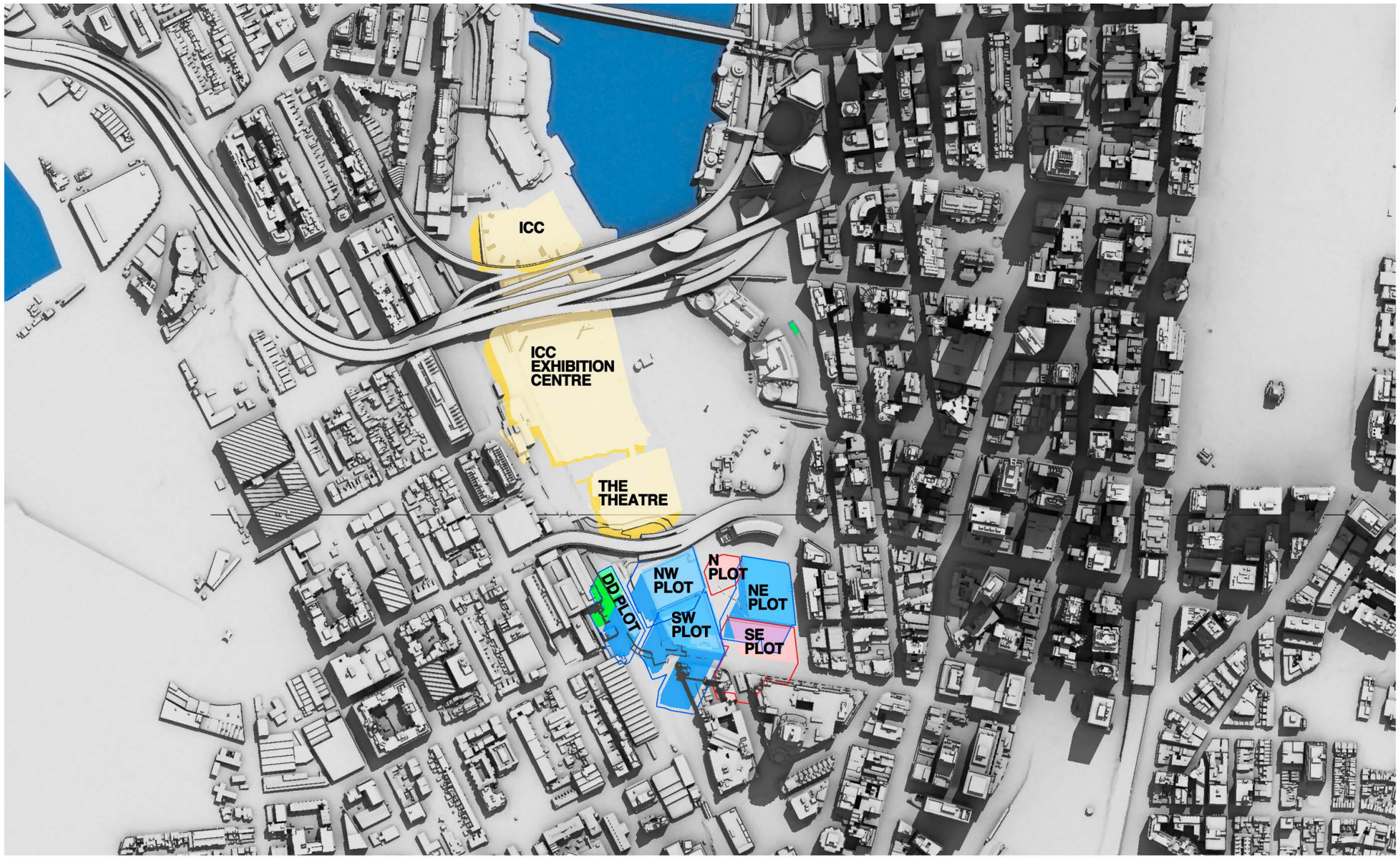
Shadows cast by SSDA3, SSDA4, SSDA5 + SSDA7

Parameter plan shadow for DD, NW, SW + NE Plot

Concept proposal parameter plan shadows for N + SE plots

Shadows cast by other buildings within the SICEEP site (PPP)

Shadows cast by Existing City Buildings



SICEEP - W1 Shadow Study

21st March, 12pm

Shadows cast by W1 building

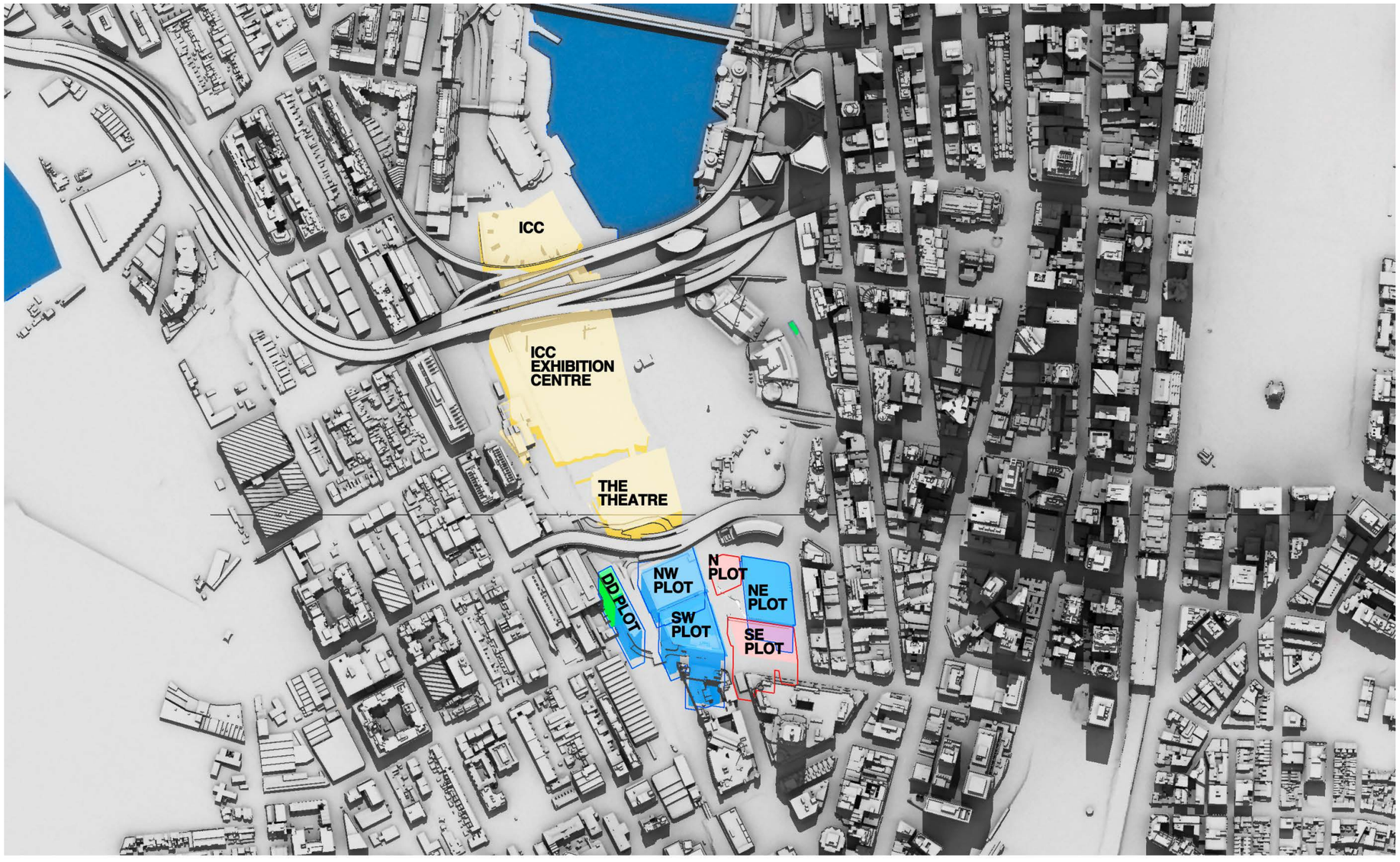
Shadows cast by SSDA3, SSDA4, SSDA5 + SSDA7

Parameter plan shadow for DD, NW, SW + NE Plot

Concept proposal parameter plan shadows for N + SE plots

Shadows cast by other buildings within the SICEEP site (PPP)

Shadows cast by Existing City Buildings



SICEEP - W1 Shadow Study

21st March, 1pm

Shadows cast by W1 building

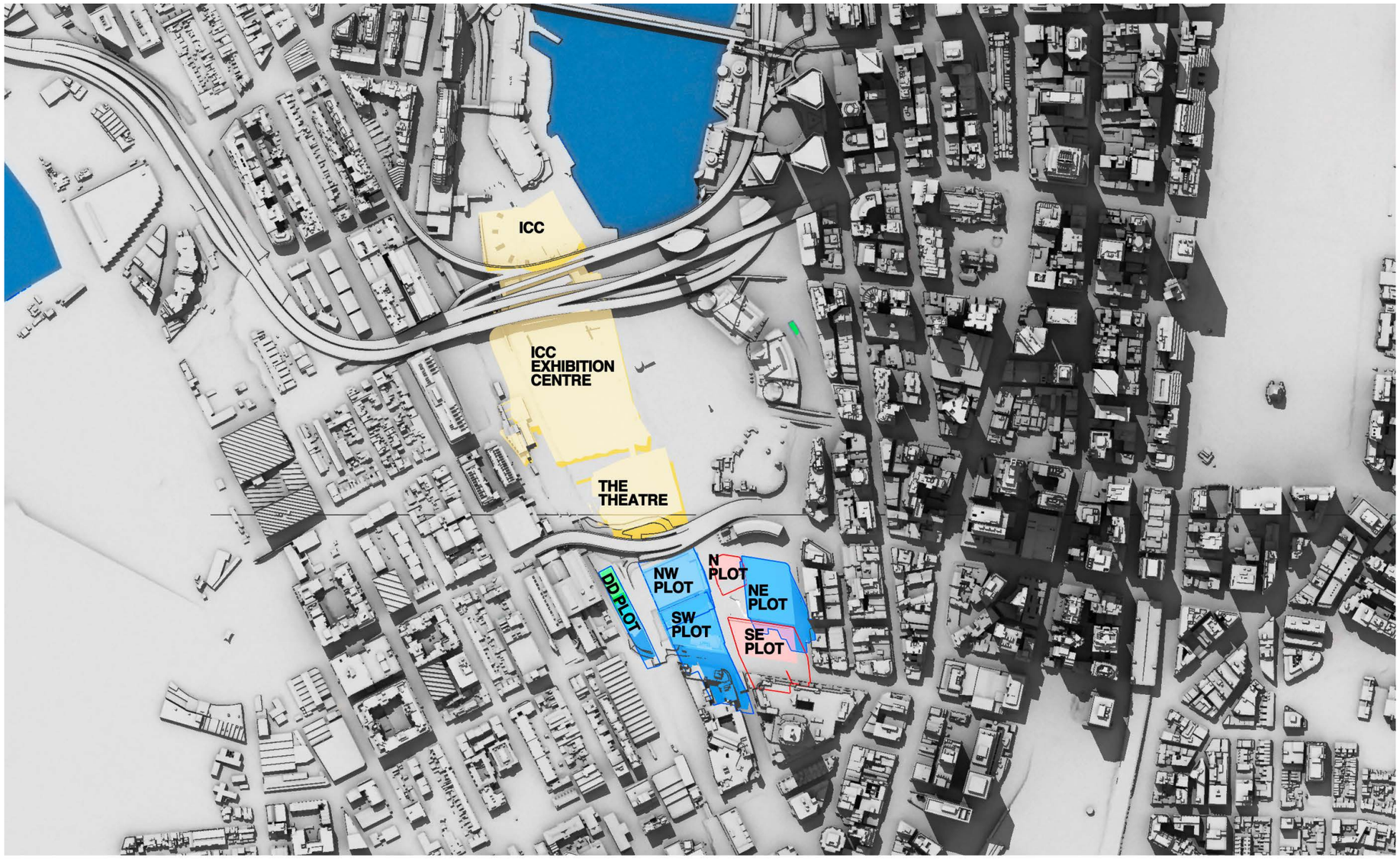
Shadows cast by SSDA3, SSDA4, SSDA5 + SSDA7

Parameter plan shadow for DD, NW, SW + NE Plot

Concept proposal parameter plan shadows for N + SE plots

Shadows cast by other buildings within the SICEEP site (PPP)

Shadows cast by Existing City Buildings



SICEEP - W1 Shadow Study

21st March, 2pm

Shadows cast by W1 building

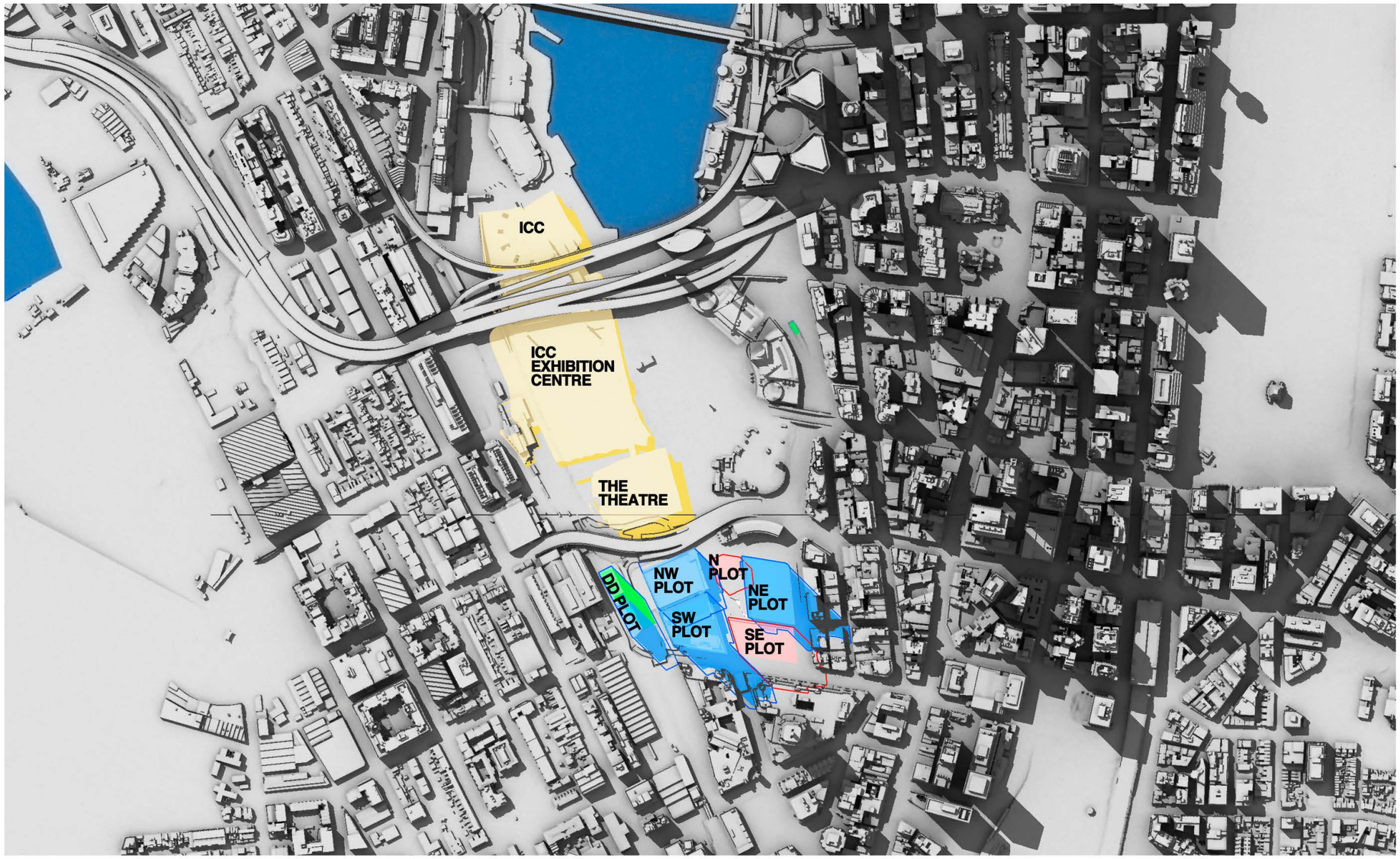
Shadows cast by SSDA3, SSDA4, SSDA5 + SSDA7

Parameter plan shadow for DD, NW, SW + NE Plot

Concept proposal parameter plan shadows for N + SE plots

Shadows cast by other buildings within the SICEEP site (PPP)

Shadows cast by Existing City Buildings



SICEEP - W1 Shadow Study

21st March, 3pm

Shadows cast by W1 building

Shadows cast by SSDA3, SSDA4, SSDA5 + SSDA7

Parameter plan shadow for DD, NW, SW + NE Plot

Concept proposal parameter plan shadows for N + SE plots

Shadows cast by other buildings within the SICEEP site (PPP)

Shadows cast by Existing City Buildings