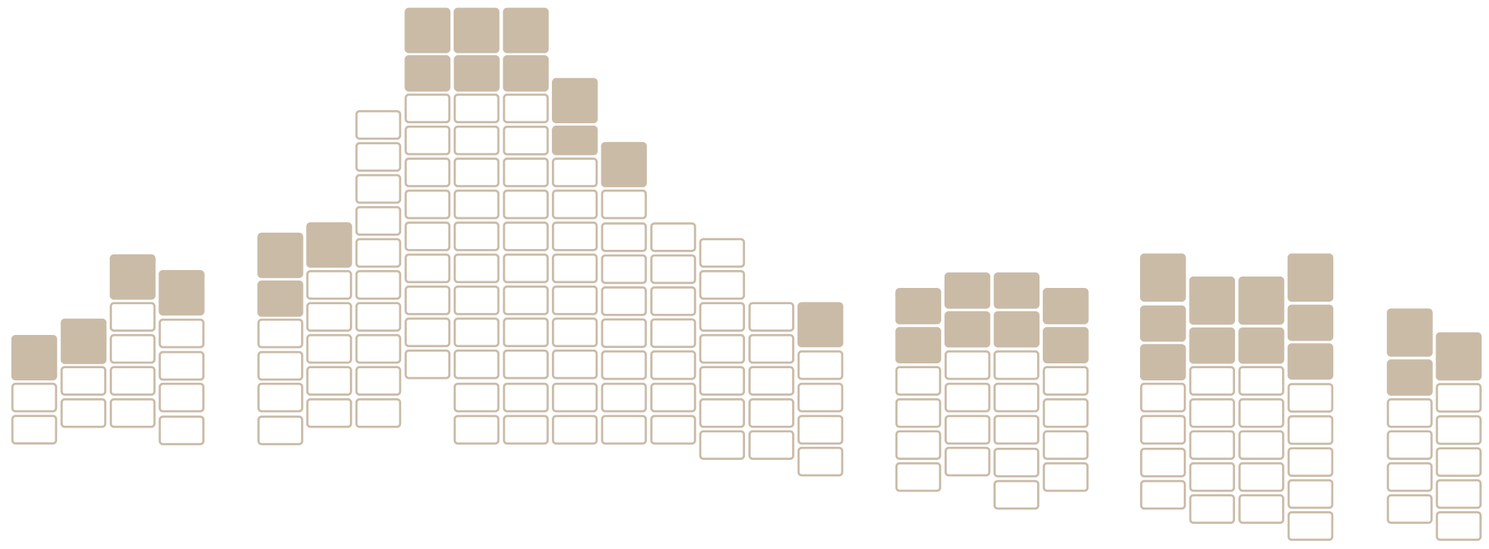

SIRIUS SITE
2-60 CUMBERLAND ST, THE ROCKS
STATE SIGNIFICANT DEVELOPMENT APPLICATION
ARCHITECTURAL DESIGN STATEMENT - OCTOBER 2020

EXECUTIVE SUMMARY

The proposal for the adaptive reuse of the existing Sirius building is primarily concerned with the retention of the existing building in a long-term economically sustainable manner. The adaptive reuse will result in a slight reduction in apartments (from 79 exsiting to 76 proposed) and will include a number of improvements to the public domain.

A Design Excellence Competition for the Sirius site concluded on 16 December 2019. The Competition Jury unanimously selected the architectural design prepared by BVN as the Competition winner. The Design Competition Jury Report was endorsed by the Jury and finalised on 29 January 2020. Since the conclusion of the Competition, BVN has been developing the Competition-winning scheme and resolving design issues to prepare for the lodgement of a State Significant Development (SSD) Application to the Department of Planning, Industry and Environment (DPIE). The Competition-winning scheme has been developed with ongoing review from the Competition Jury acting under the NSW Government Architect as State Design Integrity Panel. The Panel's final review and endorsement of the proposal is included in this submission.

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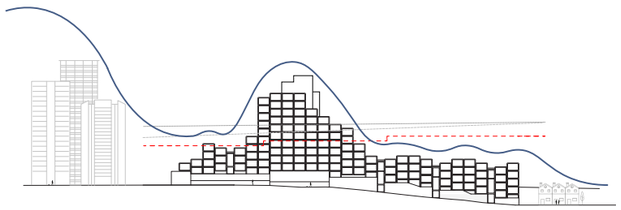
REVISION DATE: 30/10/2020 APPROVED: PT

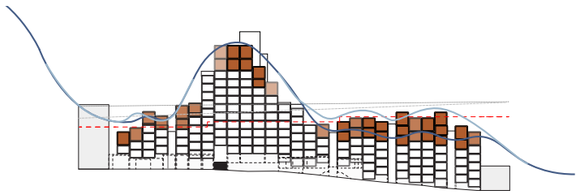
RETAIN

The design proposal for the adaptive reuse of the Sirius building is consistent with the principle of retaining the existing building with **integrity.**

The site has a significant history before the Sirius building was constructed and in recent years where it has been at a pivotal and very public crossroads determining its future.

Key to 'retaining with integrity' is maintaining **legibility** of the original building. This includes its materiality, modulating roof line, proportions, construction and modular conceptual composition. The design of new building additions is both informed by the original and clearly distinguished from it.





RESTORE

The proposal is underpinned by a series of strategies to remediate the existing concrete material and structure, integrate new services into the confined floor to floor heights, and conserve important elements of the building.

Removal of existing structure is minimised. Two bays are removed for the creation of the through site link and facade precast elements removed where new balconies are required.

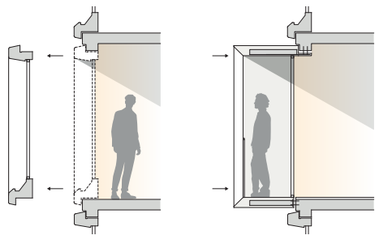
Existing concrete is to be restored. Existing brickwork around the base is re-used.

The building's circulation systems and general configuration is maintained.

New lift lobbies are located in the existing stair slots in the north and south wings with new structure that will stabilise the building appropriate to current codes. Glazing is upgraded to current code compliance .

Edge conditions along Gloucester Walk and the carpark entry on Cumberland Street have sensitive architectural interventions to improve the building's contribution to the activation of the public realm.

New additions to the main structure are envisaged as true lightweight prefabricated pods clad in recycled copper to clearly articulate the new against the restored concrete of the existing building .



REIMAGINE

The proposal envisages a residential building which provides :

- Contemporary residential amenity, including increased access to private external space, integration of new services, increased SEPP 65 compliance.
- Improves the building's ground plane contribution to the public realm through the introduction of a through-site link, the inclusion of fine grain commercial and SoHo spaces along Gloucester Walk, increasing private residential street entries, a cafe space on the north end of the building, the integration of the carpark entry on Cumberland Street into a new structure which houses a ground floor cafe and pool facilities.
- Consistent with the intent to 'retain with integrity', new building mass preserves and enhances the original concept of the building's modular composition. The positioning of new mass maintains view lines through the site and reduces the scale of the building at the northern end. While similar in form the new mass is articulated in a new metal finish that identifies the contemporary additions.

DESIGN EXCELLENCE STATEMENT

STATE ENVIRONMENTAL PLANNING POLICY AMENDMENT (STATE SIGNIFICANT PRECINCTS) 2005

The Sirius site is identified under SEPP SSP, which facilitates the development, redevelopment or protection of important sites of economic, environmental or social significance across NSW. Appendix 18 of the SEPP SSP provides site-specific controls to the Sirius site, including the requirement to undertake a Design Excellence Competition.

DESIGN EXCELLENCE COMPETITION

A Design Excellence Competition for the Sirius site concluded on 16 December 2019. The Competition Jury unanimously selected the architectural design prepared by BVN as the Competition winner. The Design Competition Jury Report endorsed by the Jury and finalised on 29 January 2020, identified that Design Excellence has been achieved.

The proposal is substantially the same as that submitted in the Design Excellence competition. Note that the proposal has been further developed and refined subject to ongoing review and endorsement from the Competition Jury acting under the NSW Government Architect as Design Integrity Panel (DIP).

DESIGN EXCELLENCE CRITERIA

The following criteria for Design Excellence are set out in the SSP SEPP:

(A) WHETHER A HIGH STANDARD OF ARCHITECTURAL DESIGN AND DETAILING APPROPRIATE TO THE BUILDING TYPE AND LOCATION WILL BE ACHIEVED.

Design excellence will be achieved by:

1. DEVELOPING AN ARCHITECTURAL RESPONSE THROUGH CAREFUL DELETION AND ADDITION TO THE EXISTING BUILDING.

The response is a considered balance of

- Conservation of the existing building,
- Exploration of opportunities to integrate its lower levels with the precinct through deletion of building mass to improve pedestrian connection and safety and the insertion of building elements sympathetic to the original that will house new active uses.
- Addition of a new architectural layer informed by an understanding of the original architectural intent but refined in detail as a counterpoint to the raw construction of the existing.

The location of new building mass respects existing view lines, largely positioned below the SEPP SSP maximum height plane or located carefully on the tower element to maintain view lines through the site and reduce the scale of the building at the northern end. Where the new development is visible, the roofs have been carefully considered to present as ‘green roofs’.

2.IMPROVING AMENITY AND ENVIRONMENTAL PERFORMANCE

Apartment replanning and amalgamation, additional balconies and operable glazing will improve the amenity for residents appropriate to the location and environment mediated by the coastal climate.

New glazing and shading from balconies with building systems and services upgrades will improve the building’s environmental performance.

New energy performance targets will be set for new construction elements

3.REINSTATING THE ORIGINAL VISION FOR LUSH ROOFTOP GARDENS.

New planters and irrigation are proposed to establish rooftop gardens. This respects the original design intent and the building’s location viewed from above from the bridge and neighbouring buildings.

4.UPGRADING STRUCTURAL PERFORMANCE

Stabilised concrete surfaces and additional lift shafts will improve the building’s structural performance while respecting the architectural composition of the original building.

5.IMPROVING SAFETY AND ACCESSIBILITY

New active street frontages, new glazed lifts and street entries to apartments will improve the pedestrian character of the area, improve safety and accessibility for residents and the public.

(B) WHETHER THE FORM AND THE EXTERNAL APPEARANCE OF THE PROPOSED DEVELOPMENT WILL IMPROVE THE QUALITY AND THE AMENITY OF THE PUBLIC DOMAIN AND, IN THE CASE OF AN ALTERATION TO THE EXISTING BUILDING, ENHANCE THE BUILDING’S HISTORIC CHARACTERISTICS

The exsiting Sirius building is valued as an example of Brutalist or Metabolist architecture. The integrity of the building rests in its pure expression of raw concrete and composition of stacked modular forms and its varied roof line. To maintain the building with integrity requires the retention of the legibility of this expression.

The building’s Brutalist past will remain – its concrete bones will be maintained, repaired and stabilised. The proposal for the

new massing as ‘distributed pods’ engages with the concept of the original while the new detailing and materiality maintains the legibility of new and old. The new work is principally copper coloured metal and glass. The colour of the metal references the bronze and black colour of the existing metal framing

The existing Sirius building’s podium presents a 100m long elevation to Gloucester Walk - a clifftop pedestrian way that negotiates The Rocks’ topography as it traverses the Argyle Cut and The Rocks Markets towards the Sydney Harbour Bridge. The Walk is well used by visitors for its views and vantage points over the Harbour as they explore the area.

The proposal will enliven Gloucester Walk as it passes the Sirius podium replacing the podium façade to Gloucester Walk which in its current form presents as a security screen to the basement carpark.

In its place a mix of commercial and retail tenancies are to be inserted – either at the level of Gloucester Walk or linking stairs to spaces above. These will enliven Gloucester Walk, complementing the adjoining retail and commercial uses, and providing surveillance from the residential community.

A publicly accessible through-site link is also proposed connecting Cumberland Street, the Sirius entry, and Gloucester Walk - this will extend the existing pedestrian path network.

Along Cumberland Street, the existing building’s street activation is limited as it presents as a series of blank, high landscape walls containing courtyards, screening services ducts, fire stairs and carpark access. A new building mass is proposed to conceal the carpark access. This new Cumberland St building will improve the quality of the public domain allowing activity along Cumberland St with retail and residents’ pool visible from the street.

Enclosing walls to ground floor apartments to the north of Cumberland St are proposed to be redesigned and services redistributed to allow better visibility, surveillance and activation at the street. Where possible, ground floor apartments are to be provided with alternate entry directly from the street.

The building and its rooftops are visible from many vantage points around Circular Quay. The proposal to reinstate rooftop gardens will significantly improve the building’s external appearance and contribute to the quality of the wider public domain.

(C) WHETHER THE DEVELOPMENT DETRIMENTALLY IMPACTS ON VIEW CORRIDORS, WITH PARTICULAR REGARD TO VIEWS TO AND FROM NATIONAL HERITAGE SITES INCLUDING THE SYDNEY OPERA HOUSE AND SYDNEY HARBOUR BRIDGE

View analysis demonstrates that the proposal will not have a detrimental impact on view corridors. In particular existing views from the Harbour Bridge eastern walkway to the Opera House will generally be maintained. Views from the walkway down to The Rocks Precinct from the southern end of the walkway are currently restricted by the height of the existing bridge wall. Where the new development is visible, the roofs have been carefully considered to present as ‘green roofs’.

(D) WHETHER THE DEVELOPMENT DETRIMENTALLY IMPACTS THE WORLD HERITAGE VALUE OF THE SYDNEY OPERA HOUSE HAVING REGARD TO DIVISION 3A OF PART 5 OF THE SYDNEY REP 2005

The proposal retains the general existing building form rising and falling as it transitions from city to harbour. The location of new building mass respects existing view lines, largely positioned below the SEPP SSP maximum height plane where it will have minor impact on the wider setting within Circular Quay or located carefully on the tower element to maintain view lines through the site and reduce the scale of the building at the northern end. Where the new development is visible, the roofs have been carefully considered to present as ‘green roofs’..

(E) HOW THE DEVELOPMENT ADDRESSES THE FOLLOWING MATTERS:

(I) THE SUITABILITY OF THE LAND FOR DEVELOPMENT

The existing building is currently vacant. The proposal for residential use is consistent with the current uses of the area and will contribute to character and activity of the precinct.

(II) THE EXISTING PROPOSED USE AND MIX.

The proposal is consistent with the existing residential use. Where beneficial – such activation of street edges - new retail and commercial uses are proposed.

(III) IMPACTS ON WORLD, NATIONAL, STATE AND LOCAL HERITAGE ITEMS IN PROXIMITY TO THE SITE

The location of new building mass respects existing view lines, largely positioned below the SEPP maximum height plane where it will have minor impact on the wider setting within Circular Quay or located carefully on the tower element to maintain view lines through the site and reduce the scale of the building at the northern end.

In this setting the reinstatement of rooftop gardens proposed in the design will enhance the character of the Circular Quay.

The proposal improves the integration of the building with the adjoining Rocks heritage precinct, providing a ‘finer grain’ edge to the building’s podium, upgrading pedestrian networks, providing a through-site connection, and activity and surveillance at ground level.

(V) THE BULK, MASSING AND MODULATION OF THE BUILDINGS

The Sirius building’s context is one of diverse scales. It is sited between the macro-scaled engineering of the Harbour Bridge and the surviving pedestrian microscale of Sydney’s earliest European settlement.

The building’s massing maintains a balance between the two scales, matching the height of the Harbour Bridge infrastructure but also granular in its stepping forms and articulated rooms. Proposed new building mass respects and retains the varied roof profile of the existing building.

(VI) STREET FRONTAGE HEIGHTS

A new building form is proposed along Cumberland Street to replace the existing blank wall to the basement carpark entry. The height of this building is set to match the height of the street wall of the adjoining development to the south.

New apartments set back from the street and the overall mass reduces in scale at the northern end.

(VII) ENVIRONMENTAL IMPACTS SUCH AS SUSTAINABLE DESIGN, OVERSHAD¬OWING AND SOLAR ACCESS, VISUAL AND ACOUSTIC PRIVACY, NOISE, WIND AND REFLECTIVITY.

Shadow diagrams submitted demonstrate that there are no significant adverse effects from overshadowing, views or visual privacy. Acoustic, noise and reflectivity impacts have also been considered to improve amenity for residents and the precinct.

(VIII) THE ACHIEVEMENT OF ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)

Key to the ESD strategy is the retention and reuse of the building’s concrete structure.

The shallow floor plates and dual aspect of the existing apartments have exceptional access to solar amenity, cross ventilation and views, in excess of the current Apartment Design Guide (ADG) mandatory requirements. Amendments to apartment layouts are proposed that will maximise these benefits and complement the expectations of the current market. Further improvements are made by adding shading balconies and glazing with increased environmental performance.

Upgrades to building services and central plant will increase the operational efficiency and reduce reliance on fossil fuels.

(IX) PEDESTRIAN, CYCLE, VEHICULAR SERVICES, ACCESS AND CIRCULATION RE¬QUIREMENTS, INCLUDING THE PERMEABILITY OF ANY PEDESTRIAN NETWORK

The proposed design will significantly improve the pedestrian experience within and adjacent to the site.

An upgrade to Gloucester Walk is proposed to upgrade its surface and interfaces.

A new public through-site link is proposed by removing one of the lower level apartments.

Improvements to the ground level landscape and lower apartment entries will significantly improve the character of the streetscape, safety and activity. New glazed lifts and new stairwells to apartments will improve access for residents to apartments that currently have no accessible entry.

(X) THE IMPACT ON, AND ANY IMPROVEMENT TO THE PUBLIC DOMAIN AND STREETSCAPE

An upgrade to Gloucester Walk is proposed to upgrade its surface and interfaces.

A new public through-site link is proposed by removing one of the lower level apartments that will further enhance this permeability.

Improvements to the ground level landscape and lower apartment entries will significantly improve the character of the streetscape, safety and activity. New glazed lifts and stairs will improve access for residents to apartments that currently have no accessible entry.

A new retail space at the northern boundary will enhance the public park immediately adjacent that is currently in poor repair and unsafe due to lack of active surveillance and activity.

(XI) THE IMPACT ON ANY SPECIAL CHARACTER AREA

Impacts on immediate precinct of The Rocks are improved at ground level, with an upgrade of Gloucester Walk and the building edge along the Walk. Similarly the interface with Cumberland Street is improved. Impacts on views and from overshadowing of new built form have been minimised.

(XII) ACHIEVING APPROPRIATE INTERFACES AT GROUND LEVEL BETWEEN THE BUILDING AND THE PUBLIC DOMAIN

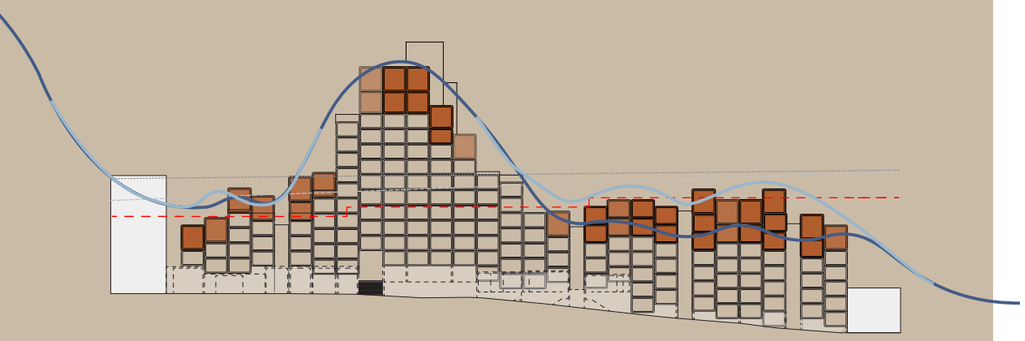
Significant enhancements to Gloucester Walk, Cumberland Street and a new through-site link will integrate the development into the pedestrian grain of The Rocks precinct.

(XIII) EXCELLENCE IN AND INTEGRATION OF LANDSCAPE DESIGN

New landscaping to Gloucester Walk, the building’s podium and public spaces, and rooftops will complement the existing concrete architectural language, reinstating the original design intent for the building and achieving the City of Sydney’s intent for green roofs.

ARCHITECTURAL DESIGN STATEMENT

OVERVIEW



The design proposal for the adaptive reuse of the Sirius building is underpinned by the idea of 'retention with integrity'; maintaining legibility of the original building and any appropriate additions.

The proposal is consistent with the site tender process reference design and the design excellence winning competition submission in balancing the following objectives:

- Protecting the existing Sirius building's integrity and iconic design
- Locating new GFA where residential amenity is maximised and view impacts miniised
- Minimising additional solar impacts on surrounding primary open spaces and adjoining dwellings
- Minimising visual impact when viewed from surrounding streets and key public places including the building's transition to The Rocks Conservation area
- Respecting the heritage and historic character of the surrounding locality
- Improving performance with respect to SEPP 65 including accessibility
- Activating the ground floor level and street frontages
- The proposal achieves Design Excellence as defined in the SSP SEPP

The proposal responds to the intent of the NSW Government's Better Placed Objectives:

1. Better fit

The proposal is contextual, local and of its place through:

- retaining the existing building's stepped heights, which ties together the macro scale of the Harbour Bridge with the finer grain of The Rocks
- acknowledging the layers of old and new in the evolution of The Rocks
- balcony additions that will improve amenity and add vitality to the building's facades
- enhancing the ground plane and landscape, including a public through-site link.
- minimising impacts on view corridors
- imiting excavation and demolition impacts on sensitive heritage, the community and local businesses by retaining the structure of the building.

2. Performs better

The adaptive reuse of the building will maximise sustainability through:

- retaining the existing building, which can achieve a reduction in embodied energy
- retaining the building's tower form and shallow footprint, which provides excellent access to solar amenity, views and cross ventilation
- maximising environmental performance through the addition of shading balconies and new glazing
- improving operational efficiency through upgrades to building services
- landscaping that reduces heat island effects.

3. Better for the community

The proposal improves the quality and connectivity of the public domain by:

- upgrades to public pathways around the site
- adding a public through-site link connecting Gloucester Walk to the building entry and Cumberland Street
- adding new paving and lighting along Gloucester Walk
- creating ground floor apartments with street entries to improve street activation and surveillance
- landscaping to improve visual connectivity between shared spaces and entries.

4. Better for people

The proposal will improve the building's safety, comfort and liveability by:

- improving apartment layouts to provide living spaces in keeping with contemporary standards
- improving accessibility within the building through new lifts and stairs
- increasing safety on surrounding streets through increased surveillance and better street lighting
- retaining the building for residential purposes supports the rapidly growing population, changing lifestyles and demographics.

5. Better working

The proposed building restorations and additions will increase the building's functionality and efficiency through:

- structural enhancements and treatment of concrete degradation
- improving access using upgraded and additional lifts and stairs
- enhancing apartment quality and layouts t
- better ventilation and more efficient building services.

Built Form and Urban Design

The adaptive reuse of Sirius site includes adding new building mass consistent with the SEPP SSP which allows a maximum GFA on the site of 8420sqm.

Following with the intent to 'retain with integrity' the new building mass has been located to preserve and enhance the original concept of the building's modular composition.

Viewlines from multiple points have been considered in the location of the proposed alterations and additions. (Visual Impact Assessment has been prepared by GMU and is appended to this application). Conceptually mass added to lower levels considers the views across the precinct to the Opera House from the Harbour Bridge pedestrian walk and reduces in scale at the northern end where the building transitions to the lower built form of the precinct.

New mass added to the tower echoes the massing of the original building as a modulating roof line that builds to a peak at the top of the tower. At this point the new copper clad additions are carefully composed with particular regard to the views from the north along the Harbour Bridge. New plant room forms assist with this massing so that the building appears to step in both north /south and east/west orientations. Viewed from the lower levels of The Rocks this massing strengthens the reading of the building's verticality.

The additional mass is located where there will be minimal addition of overshadowing to the surrounding developments and public domain. This is largely due to the building's north/south orientation and the exsiting shadowing cast by the existing tower form of the building and the significant height of the Harbour Bridge approach.

The balance of concrete to copper is carefully considered on the proposal. While similar in form the majority of the new mass is articulated in a new metal finish that identifies the contemporary additions. Areas of new concrete will match the colour of the existing (cleaned) concrete but will still be idenifiable as new work by a change in texture.

Architectural Context

The existing Sirius building is valued as an example of Brutalist or Metabolist architecture. The integrity of the building rests in its pure expression of raw concrete and modulating stacked forms. To maintain the building with integrity requires the retention of the legibility of this expression.

The building's Brutalist past will remain – its concrete bones will be maintained, repaired and stabilised. The proposal for the new massing as 'distributed pods' engages with the concept of the original while the new detailing and materiality maintains the legibility of new and old.

Apartments

The proposal reconfigures existing apartments to maximise their unique dual aspect and integrate required new services.

Redundant rooms such as drying rooms and garbage rooms are proposed to be integrated to increase the size of apartments.

Existing apartments are amalgamated horizontally as indicated which will reduce the number of single-sided 1-bedroom apartments higher in the tower that currently have limited ventilation and high exposure to western sun.

The 2400mm ceiling height in existing apartments will be offset by the release of full height glazing, expansive harbour views, access to flush balconies, and the elimination of ceiling mounted services.

New balconies are provided to apartments which currently have no access to outdoor area. These provide a secondary benefit to the amenity of the apartments providing shading and visual privacy.

New apartments are shown with an allowance for a ceiling zone and 2700mm ceilings to living spaces. Where possible access to roof terraces are provided.

All windows are proposed to be replaced, significantly improving the thermal and acoustic performance of apartments.

Structure

The requirement to upgrade the existing structural capacity in the lower wings has been developed in conjunction with the redesign of common stair access. By replacing the existing shared stairs, new steel structure can be inserted to stiffen the building and provide a new lift access to these apartments. A new stair is reinstated extending to the new mass above. The new lightweight 'pod' apartments can be added to the wings and the tower without exceeding the existing structural capacity.

Servicing

Services strategies have been developed to ensure adequate provision for risers and plant which is critical given the shallow ceiling heights in the existing apartments precludes ceiling zones. Mechanical options incorporate air conditioning with interior strategies. These allow services runs and registers to occur in joinery rather than ceiling bulkheads.

Allowances for key equipment such as cooling towers and chamber substations are shown.

The existing ramp to the basement carpark does not meet current standards due to its steepness transition grades and a new complying ramp is shown in the proposal with a separate vehicle lift for truck use.

A new building is proposed at Cumberland St to enclose the vehicle lift and carpark ramp, conceal cooling tower plant, and contain a new cafe and pool for residents.

The Rocks Context & Ground Plane Strategy

The Rocks precinct is characterised by its stepping topography and fine-grained pedestrian character. The proposal includes a new lift from Gloucester Walk to Cumberland St level. Combined with a new through-site link this will improve accessible connections throughout the precinct.

Consistent with SEPP SSP, the proposal will better integrate Sirius with its context by increasing activation to its public edges:

- As Gloucester Walk passes the Sirius site, the existing building's podium presents poorly as an inactive 100m long elevation - predominantly as security screens to its basement carpark. The proposal will focus on upgrading this elevation, inserting a mix of Soho spaces and retail tenancies with existing residential apartments.
- Along Cumberland St, the existing building's street activation is limited as it presents as a series of blank, high landscape walls containing courtyards, screening services ducts, fire stairs and carpark access. A new building mass is proposed to conceal the carpark access ramp, satisfactorily terminate the Cumberland St wall at a public 'square' and, provide an address and activity to Cumberland St
- Enclosing walls to ground floor apartments to the north of Cumberland St are proposed to be redesigned and services redistributed to allow better visibility, surveillance and activation at the street. Where possible, ground floor apartments are provided with alternate entry directly from the street.

CONTEXT ANALYSIS

The Sirius site sits in the wider context of Circular Quay between the significant heritage items of the Sydney Harbour Bridge to the west and the Sydney Opera House to the east and sits within the heritage precinct of The Rocks.

The site is immediately surrounded by:

- Cumberland Street to the west, and adjacent to the southern approaches to the Sydney Harbour Bridge beyond (a State heritage listed item, known as 'Sydney Harbour Bridge approaches' including pylons, pedestrian stairs and access roads);
- George Street to the north with the National heritage listed Sydney Harbour Bridge beyond;
- Gloucester Walk to the east with Circular Quay beyond; and
- A commercial office building adjacent to the site to the south (86 Cumberland Street, The Rocks).

Circular Quay Wharf is approximately 350m to the south-east of the site, the Sydney Harbour Bridge is approximately 300m to the north of the site, and the Sydney Opera House is approximately 600m to the east with the Royal Botanic Gardens beyond. Walsh Bay (approximately 220m) and Barangaroo Headland Park (approximately 600m) are located to the west of the site. Central Sydney extends to the south, with Martin Place located approximately 1km from the site.

The closest train station to the site is approximately 700m (walking distance) to the south-east at Circular Quay Station.

The Rocks is situated on a dramatic headland at the narrowest point of Sydney Harbour, and on the northern edge of Sydney's CBD.

The sandstone topography, which gives the precinct its name, and the surrounding Sydney Harbour provides The Rocks with a strong sense of place.

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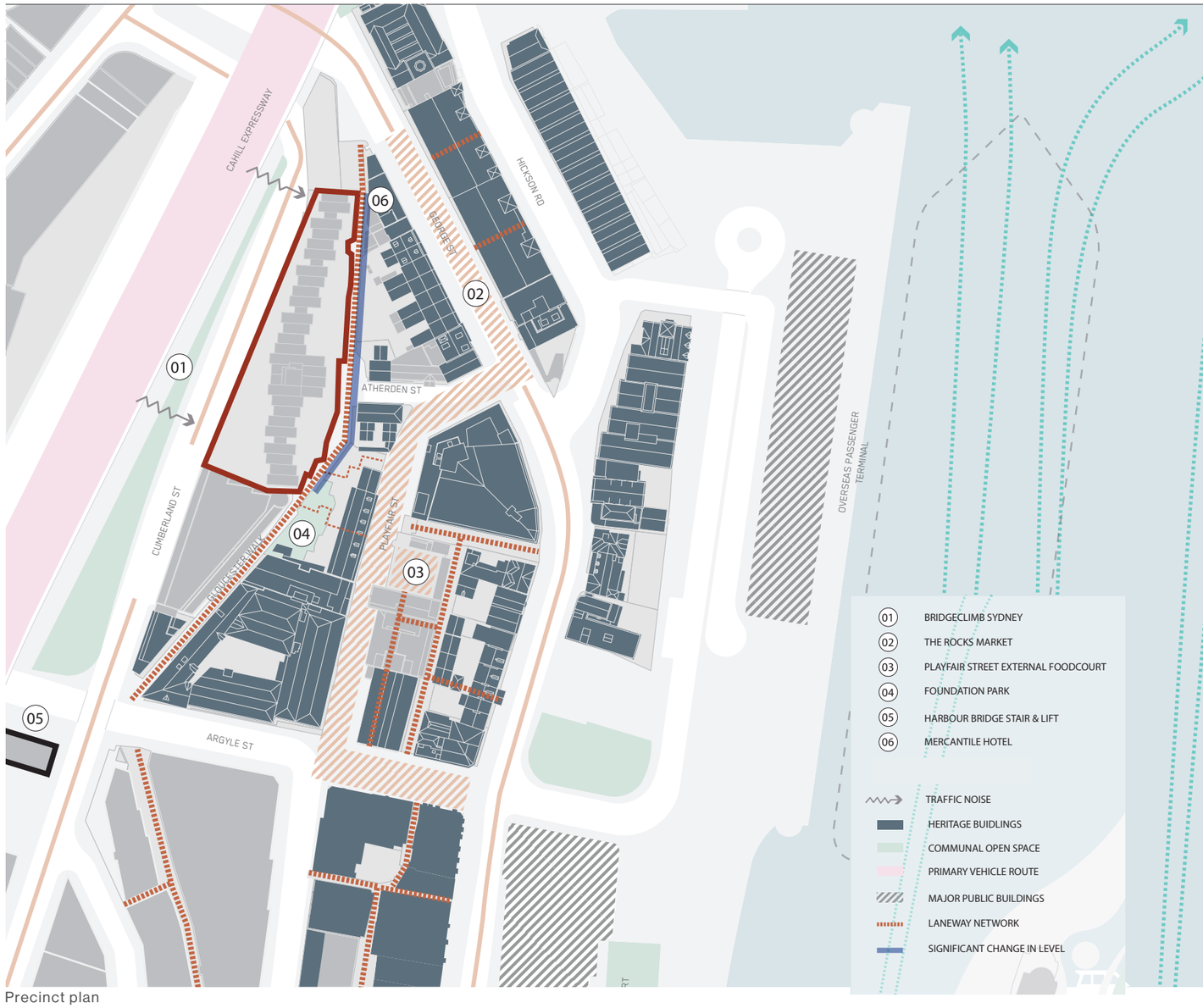
Local Context

The lower levels of the exsiting Sirius Building sit below the height of the Sydney Harbour Bridge approach to the west. Above this the apartments have views to the Harbour to the west. At these levels there is significant acoustic impact from traffic on the Bridge.

The rise in topography and lower heights of buildings to the east facilitate views and good solar amenity east to the harbour and Sydney Opera House. Gloucester Walk borders the site's eastern edge along a sandstone 'bluff' and is of heritage significance.

Terrace buildings housing commercial uses along George St sit at a lower level, below the sandstone escarpment. At the northern end the Mercantile Hotel rises to 4 stoteys.



Precinct plan

The Rocks is the traditional land of the Cadigal Aboriginal people and has a complex and layered history as a port settlement during Australia's colonial period. The area represents more than two centuries of significant cultural activity, including early contact between Aboriginal people and European people, colonial settlement, maritime activity and struggles for heritage conservation to preserve its history

The Sirius site and building is not listed as a heritage item and no heritage constraints apply to the site. The site is surrounded by signifiacnt state significant heritage items and is within The Rocks Conservation Area.

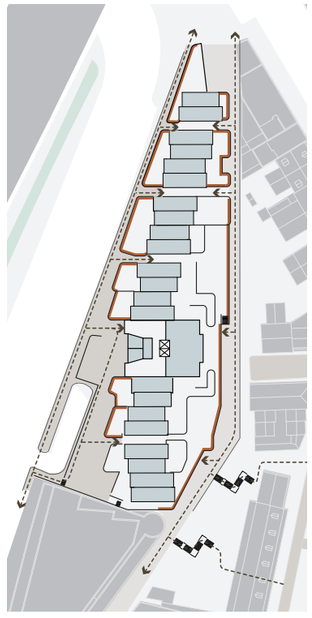
The Sirius building is an apartment building in The Rocks. The building was designed in 1978–1979 by Tao Gofers, for the Housing Commission of NSW, and was used for social housing until 2018 (the building is now vacant). The building is an example of brutalist architecture in Australia.

The Sirius building is currently comprised of 79 residential apartments, community rooms, rooftop garden and 70 car parking spaces in an irregular shaped basement. Vehicular access to the building is from Cumberland Street. The building is composed of stacked geometric cuboids finished in off-form concrete that step up in height to 11-storeys.

The building has its main pedestrian access from Cumberland Street through its central tower lift lobby and four individual stair lobbies to the building's wings. A carpark ramp connecting the basement carpark is accessed from Cumberland St.

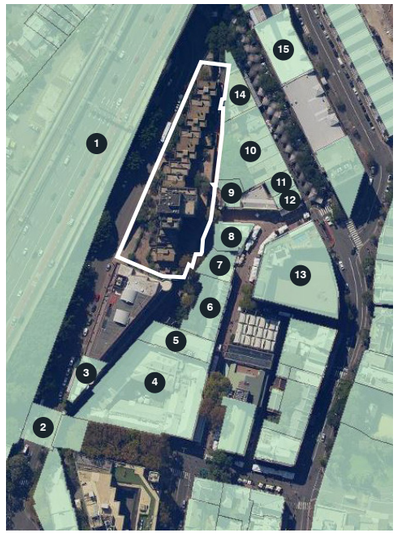
The exsiting building has a secondary address from Gloucester Walk - a pedestrian walkway connecting north south through the precinct. The connection to Gloucester Walk is currently external stairs, carpark screens and apartment courtyard walls.

Views of the exsiting building from Cumberland St and Gloucester Walk



Existing Pedestrian Access

Map	Item
1	Sydney Harbour Bridge, approaches and viaducts (road and rail)
2	Argyle Cut
3	Glenmore Hotel
4	Argyle Stores
5	Cleland Bond Store (part of Argyle Stores)
6	Playfair Street Terraces
7	Argyle Terrace - Caminetto's Restaurant
8	Playfair's Terrace
9	Avery Terrace
10	Sergeant Majors Row (terrace)
11	Merchants House
12	Union Bond Store (former), Westpac Bank
13	Old Sydney Holiday Inn
14	Mercantile Hotel
15	Metcalfe Bond Stores



Surrounding State Significant Heritage Items

PLANNING SUMMARY

The following summarise the key apects of the proposal:

LAND USE

The exsiting Sirius building is residential use only. The proposal responds to the SEPP intent for activation along street edges by integrating opportunities for new retail / commercial uses.

Site area	3,664.5m²
Existing site coverage (building footprint)	1462.8 sqm (39.91%)
Proposed site coverage (building footprint)	2126.5 sqm (58.03%)
Existing building GFA	6538 sqm
Proposed building GFA	8420 sqm (8419.38sqm in schedule)
Proposed GFA by use:	
Residential area	7302.90 sqm
Retail area	156.87 sqm
Commercial area	153.98 sqm
Common Property area	805.62 sqm

Existing FSR	1.784 : 1
Proposed FSR	2.298 : 1
Existing number of apartments	79 apartments
Proposed number of apartments	76 apartments
Existing number of car parking spaces	70 car parking spaces
Proposed number of car parking spaces	70 car parking spaces

PROJECT GFA (BY FUNCTION)

SSDA_GFA RESIDENTIAL	
Level	GFA
B2b	56.76 m²
B2a	99.35 m²
B1b	112.63 m²
B1a	122.36 m²
LEVEL 01	97.15 m²
LEVEL 02	271.13 m²
LEVEL 03	239.72 m²
LEVEL 04	383.04 m²
LEVEL 05	462.58 m²
LEVEL 06	397.62 m²
LEVEL 07	694.41 m²
LEVEL 08	467.45 m²
LEVEL 09	635.13 m²
LEVEL 10	378.20 m²
LEVEL 11	507.20 m²
LEVEL 12	233.81 m²
LEVEL 13	333.02 m²
LEVEL 14	162.69 m²
LEVEL 15	331.57 m²
LEVEL 16	36.02 m²
LEVEL 17	293.14 m²
LEVEL 18	36.88 m²
LEVEL 19	248.90 m²
LEVEL 20	36.51 m²
LEVEL 21	164.15 m²
LEVEL 22	36.54 m²
LEVEL 23	162.93 m²
LEVEL 25	153.74 m²
EX PLANT	148.28 m²
TOTAL GFA	7302.90 m²

SSDA_GFA RETAIL	
Level	GFA
B1a	22.09 m²
LEVEL 01	36.71 m²
LEVEL 03	98.07 m²
TOTAL GFA	156.87 m²

SSDA_GFA COMMERCIAL (SOHO)	
Level	GFA
LEVEL 02	125.24 m²
LEVEL 03	28.74 m²
TOTAL GFA	153.98 m²

SSDA_GFA COMMON PROPERTY AREA	
Level	GFA
B2b	4.88 m²
B2a	5.08 m²
B1a	214.45 m²
LEVEL 02	4.72 m²
LEVEL 03	266.38 m²
LEVEL 05	96.63 m²
LEVEL 07	24.20 m²
LEVEL 09	24.23 m²
LEVEL 11	24.21 m²
LEVEL 13	22.22 m²
LEVEL 15	22.18 m²
LEVEL 17	21.95 m²
LEVEL 19	16.10 m²
LEVEL 21	21.25 m²
LEVEL 23	21.06 m²
LEVEL 25	16.07 m²
TOTAL GFA	805.62 m²

SSDA_TOTAL GFA
8419.38 m²

GFA CALCULATION

- FACADE MEASURED TO INSIDE FACE OF LINING
- FACADE MEASURED TO INSIDE FACE OF LINING BELOW WINDOW SILL
- FACADE MEASURED TO 50MM OFFSET FROM GLAZING MULLION WHERE FULL HEIGHT GLAZING/ SLIDING DOOR
- ONE LEVEL OF STAIRS INCLUDED IN UNITS OF MULITPLE LEVELS

PROJECT GFA (PER LEVEL)

SSDA_GFA (PER LEVEL)	
Level	GFA
B2b	61.64 m²
B2a	104.43 m²
B1b	112.63 m²
B1a	358.90 m²
LEVEL 01	133.86 m²
LEVEL 02	401.10 m²
LEVEL 03	632.91 m²
LEVEL 04	383.04 m²
LEVEL 05	559.21 m²
LEVEL 06	397.62 m²
LEVEL 07	718.61 m²
LEVEL 08	467.45 m²
LEVEL 09	659.36 m²
LEVEL 10	378.20 m²
LEVEL 11	531.41 m²
LEVEL 12	233.81 m²
LEVEL 13	355.23 m²
LEVEL 14	162.69 m²
LEVEL 15	353.75 m²
LEVEL 16	36.02 m²
LEVEL 17	315.09 m²
LEVEL 18	36.88 m²
LEVEL 19	265.00 m²
LEVEL 20	36.51 m²
LEVEL 21	185.40 m²
LEVEL 22	36.54 m²
LEVEL 23	183.99 m²
LEVEL 25	169.81 m²
EX PLANT	148.28 m²
TOTAL GFA	8419.38 m²

SSDA_TOTAL GFA
8419.38 m²

GFA CALCULATION

- FACADE MEASURED TO INSIDE FACE OF LINING
- FACADE MEASURED TO INSIDE FACE OF LINING BELOW WINDOW SILL
- FACADE MEASURED TO 50MM OFFSET FROM GLAZING MULLION WHERE FULL HEIGHT GLAZING/ SLIDING DOOR
- ONE LEVEL OF STAIRS INCLUDED IN UNITS OF MULITPLE LEVELS

APARTMENT SCHEDULE - APARTMENT MIX

STUDIO	9	12%
1 BED	6	8%
2 BED	42	55%
3 BED	14	18%
4 BED	5	7%
TOTAL	76	100%

TOTAL APARTMENTS = 76

APARTMENT SCHEDULE - APARTMENT TYPE MIX

STUDIO

ROOM CODE	COUNT
1B	1
1C LIVABLE	8
TOTAL: 9	

1 BED

ROOM CODE	COUNT
1A	2
1A-2	2
1D	1
1E	1
TOTAL: 6	

2 BED

ROOM CODE	COUNT
2A-1 LIVABLE	4
2A-2 LIVABLE	4
2B	7
2C	12
2C-M	7
2C-P	2
2C-PM	1
2C-V	2
2F	1
2G	1
2H	1
TOTAL: 42	

3 BED

ROOM CODE	COUNT
3A	1
3B	1
3D	1
3E	1
3E-2	1
3E-3	1
3F ADAPTABLE	1
3G	1
3H ADAPTABLE	1
3J	1
3K	1
3K-2	1
3L	2
TOTAL: 14	

4 BED

ROOM CODE	COUNT
4A	1
4B	1
4B-2	1
4C	1
4D	1
TOTAL: 5	

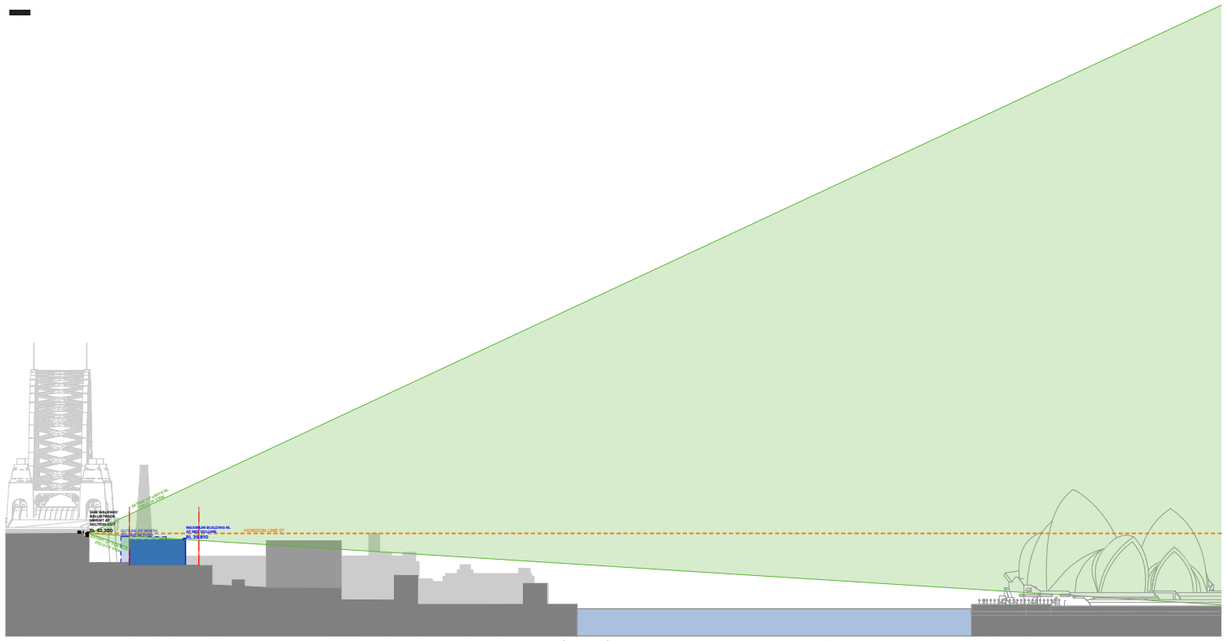
VIEWS AND SHADOWS

VIEW IMPACTS

The SEPP SSP Height of Buildings Map provides the maximum height plane designed to protect views from the Harbour Bridge walkway across the building to the Opera House (see adjacent view cone analysis). Note that the height plane only applies where the existing Sirius building is entirely demolished.

A detailed View Impact Analysis has been undertaken by GMU which concludes that there are no significant impacts of the proposed massing on these views as well as the required views in the Secretary's Environmental Assessment Requirements (SEARs).

VIEW CONE FROM SHB WALKWAY



View cone analysis from Department of Planning Planning Report (2017) demonstrating basis for SEPP maximum height plane

VIEW 4: EXISTING

VIEW 4: PROPOSED

VIEW 5: EXISTING

VIEW 5: PROPOSED

View impact massing studies - refer to View Impact Report from GMU

The adjacent diagrams indicate additional overshadowing from the proposed massing compared to exsiting shadows. Note that these diagrams do not take into account overshdowing caused by a number of large trees east of the building. These trees are in good health and so likely to be maintained for the forseeable future.

In summary:

– Additional overshadowing is caused to the roadway of Cumberland Street at 9am.

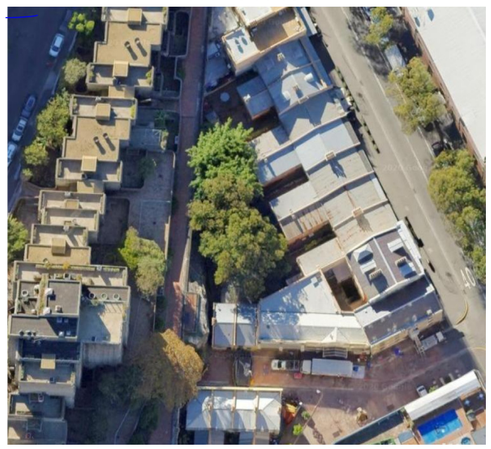
–Minor additional overshadowing is caused between 10am and 12pm – mostly to 86 Cumberland Street (not a heritage item).

– Limited additional overshadowing is caused to rooftops at 23-27 Playfair Street at 1pm. Note that these areas are likely to be already affected by existing mature trees not modelled in this study).

– Limited additional overshadowing is caused to a small section of Playfair Street between 1pm and 2pm. Note that there is an existing shad structure at 22-26 Playfair St not modelled in this study.

- Additional overshadowing to the rear of terraces fronting George St and Atherden St between 1-2pm. However there are several large trees already overshadowing these properties. If trees are taken into account, there is likely to be little additional from the proposal

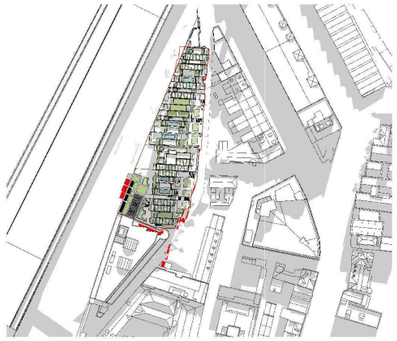
- Additional shadow at 3pm falls on the roofs and only minor shadow on elevations of properties to George St, clarified by further elevational shadow studies.



Aerial photo showing exsiting mature trees

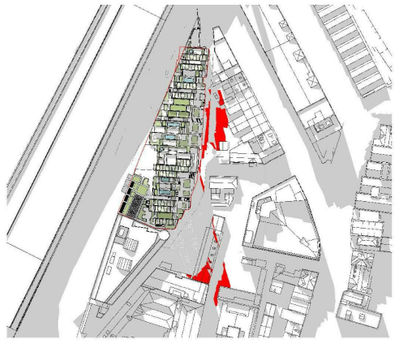
21st JUNE 9am

21st JUNE 10am

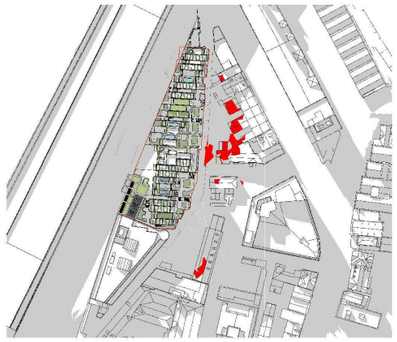


21st JUNE 11am

21st JUNE 12pm



21st JUNE 1pm



21st JUNE 2pm

21st JUNE 3pm

ADDITIONAL SHADOWS
CAST BY SSDA MASS

Overshadowing studies 21st June comparing proposed design with existing

ARCHITECTURAL CONTEXT

The Sirius building is widely held as one of Sydney's best and most intact examples of 'Brutalism' – an international architectural movement most easily recognised for a singular reliance on raw concrete ('beton brut') to express ideas of a new social egalitarianism. Its architects eschewed traditions of decoration for a tectonic that denoted 'honesty' of structure and material. Given its influence on architecture globally in the decade before Sirius and its interwoven social agenda, it is understandable that Brutalism would influence Sirius's architect.

The building design sought to engage in a new architectural language and the role of architecture in the future of housing and the future of the city. The building's concrete expression appears influenced by international Brutalist and Metabolist architecture.

The 'cuboid' stacks of the Sirius apartments mirror the 'capsules' of the buildings designed by Metabolists whose strategies envisaged 'buildings and cities must be able to adapt, grow, elevate, even float, if they are to survive the dual pressures of rapid modernization and inevitable natural change…' (Project Japan Metabolism Talks). These buildings were capable of reordering and change without disrupting their conceptual basis.

The modularity of Sirius's language can be viewed through a metabolist lens – a 'system architecture' able to be reordered to meet changing circumstance. The core module is key as it represents the identity of the individual. The assembly of the modules represents community and social cohesion but responds to external pressures.

The proposal works with the intellectual intent of Sirius by reordering the building's architectural 'system' to accommodate its future needs.

New proposed additions do not imitate - they are identifiable through a new materiality - however their articulation and form belong to the order of the original.

The building's Brutalist past remains legible – its concrete bones will be maintained and repaired – and the spirit of its composition becomes the catalyst for the language of the new.

Existing Sirius building

Unite d'Habitation, France

Global examples of contemporaneous architecture

Nakagin Capsule Tower, Japan

Habitat 67, Canada

Proposed modular adaptation of the Sirius building

GROUND PLANE AND PUBLIC DOMAIN

The Rocks precinct is characterised by its stepping topography and fine-grained pedestrian character. The proposal upgrades the existing street and laneway egdes and connections.

Consistent with SEPP SSP, the proposal will better integrate Sirius with its context by increasing activation to its public edges:

Precinct Connections

The proposal includes a new lift from Gloucester Walk to Cumberland Street level. Combined with a new through-site link this will provide improved accessible connections throughout the precinct.

Gloucester Walk

As Gloucester Walk passes the Sirius site, the existing building's podium presents poorly as an inactive 100m long elevation - predominantly as security screens to its basement carpark. The proposal will upgrade this elevation, inserting a mix of Soho spaces and retail tenancies with existing residential apartments.

Cumberland Street

Along Cumberland Street, the existing building's street activation is currently limited as it presents as a series of blank, high landscape walls containing courtyards, screening services ducts, fire stairs and carpark access. A new building mass is proposed to conceal the carpark access ramp, satisfactorily terminate the Cumberland Street wall at a public 'square' and, provide an address and activity to Cumberland Street. This building presents a 0m setback to Cumberland Street consistent with the street wall and matches the adjacent building height.

Enclosing walls to ground floor apartments to the north of Cumberland Street are proposed to be redesigned and services redistributed to allow better visibility, surveillance and activation at the street. Where possible, ground floor apartments are provided with alternate entry directly from the street.

A new retail tenancy is proposed to replace an apartment at the northern end of the site. This will increase activation at the street edge and the exsiting 'pocket park' adjacent the site to the north, which is proposed to be upgraded.

Proposed view from Cumberland St

View looking at the northern pocket park

Proposed view from Cumberland St

Proposed view from Gloucester Walk looking north

Proposed view from Gloucester Walk looking west

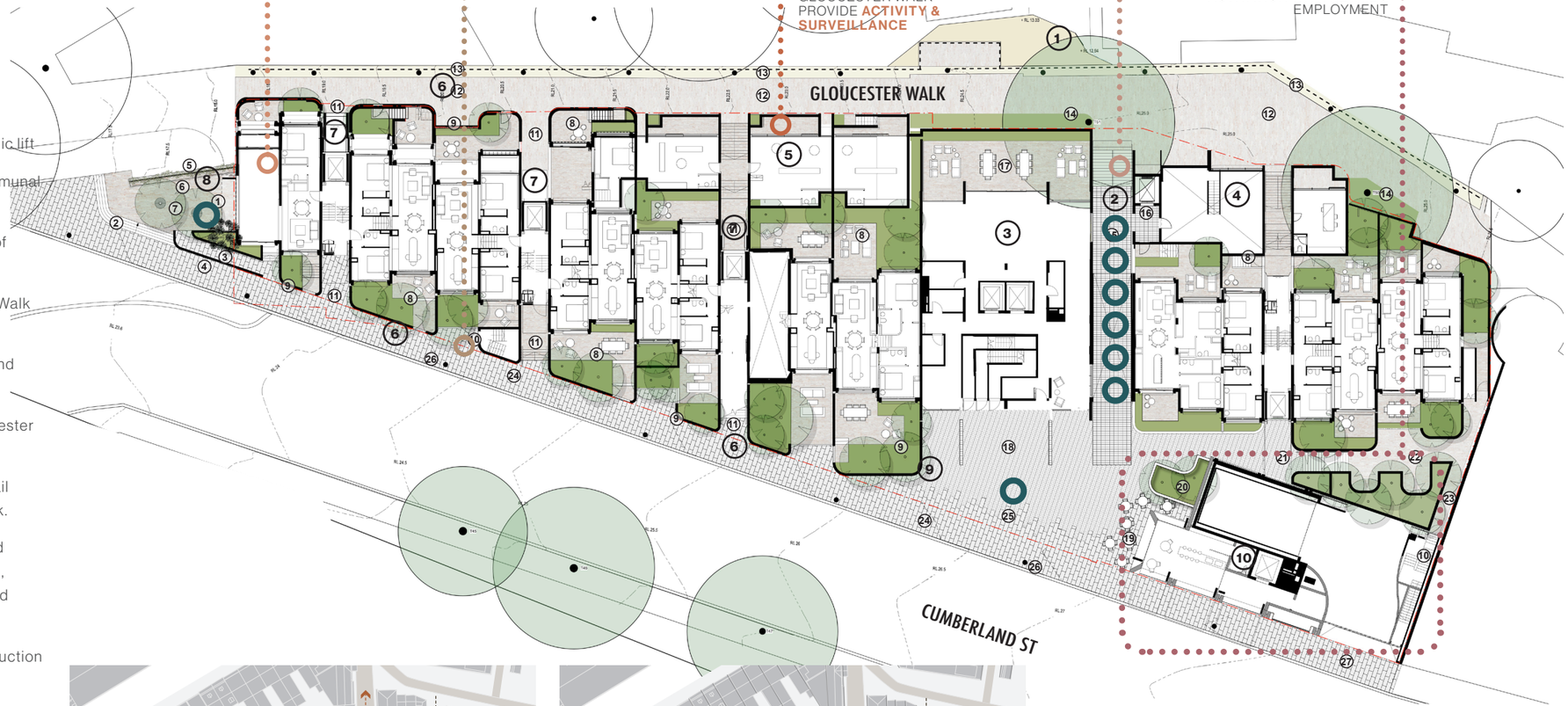
STREET ENTRIES TO CUMBERLAND STREET AND GLOUCESTER WALK GROUND FLOOR APARTMENTS

RETAIL OPPORTUNITIES TO **ACTIVATE PARK** ON CUMBERLAND STREET

SOHO RESIDENTIAL ENTRIES FROM GLOUCESTER WALK PROVIDE **ACTIVITY & SURVEILLANCE**

RETAIL & COMMERCIAL INSERTIONS AT GLOUCESTER WALK TO COMPLEMENT SURROUNDING USES. **THROUGH-SITE LINK** CONNECTS GLOUCESTER WALK TO CUMBERLAND STREET

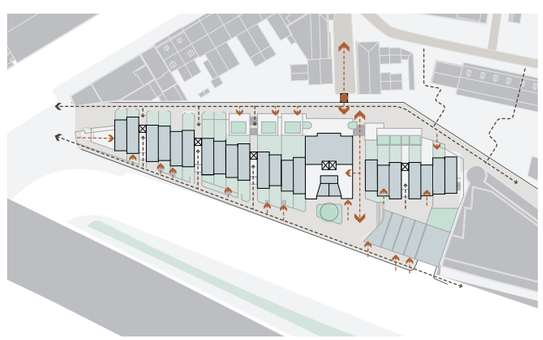
A NEW BUILDING AT CUMBERLAND STREET WILL ENCLOSE THE CAR PARK ENTRY & PROVIDE STREET ACTIVATION WITH RETAIL & EMPLOYMENT



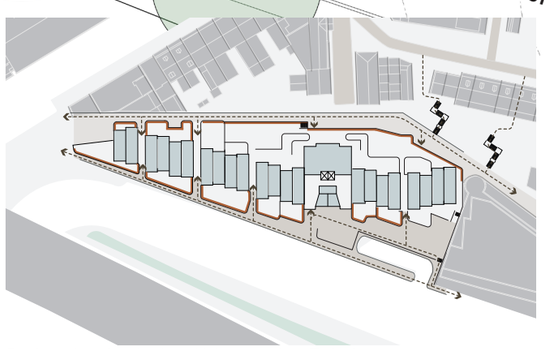
The proposal improves interaction with the public realm by inserting new uses and linkages around the building edges.

1. Gloucester Walk
2. Through Site Link between Gloucester Walk and Cumberland Street incorporating stairs and a public lift
3. Phillip Room - to be retained as the residents communal space
4. Small commercial/retail studios to the south end of Gloucester Walk
5. Soho studios to the middle section of Gloucester Walk
6. Private courtyard entries to the remaining garden apartments along Gloucester Walk and Cumberland Street.
7. New entries to the building wing lobbies off Gloucester Walk
8. Activation and rejuvenation through new cafe/retail space addressing Cumberland Street and the park.
9. A public forecourt on Cumberland Street activated by the main apartment lobby, the through-site link , garden apartment entries and the new Cumberland Building
10. Relocation of the carpark ramp to allow the construction of the new Cumberland Building

PROPOSED PUBLIC ART LOCATION



Pedestrian Analysis + Urban grain - Proposal



Pedestrian Analysis + Urban grain - Existing

BUILT FORM

Massing

The adaptive reuse of Sirius includes susbstantially retaining building mass and adding new building mass consistent with the SEPP SSP which allows a maximum GFA on the site of 8420sqm.

Following with the intent to ‘retain with integrity’ the new building mass has been located to preserve and enhance the original concept of the building’s modular composition.

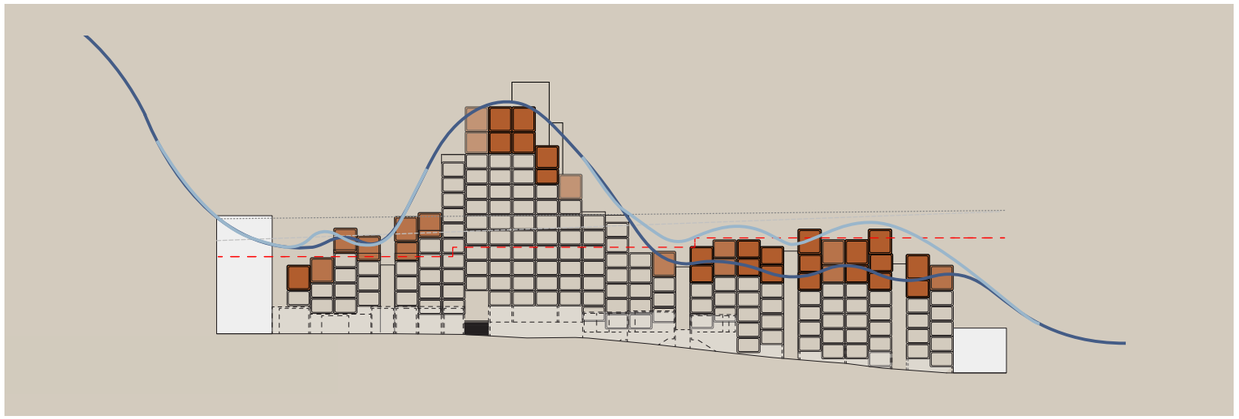
Viewlines from multiple points have been considered in the location of the proposed alterations and additions. A Visual Impact Assessment has been prepared by GMU.

Conceptually mass added to lower levels considers the views across the precinct to the Opera House from the Harbour Bridge pedestrian walk and reduces in scale at the northern end where the building transitions to the lower built form of the precinct.

New mass added to the tower echoes the massing of the original building as a modulating roof line that builds to a peak at the top of the tower. At this point the new copper clad additions are carefully composed with particular regard to minimise impact on the views looking east from the Harbour Bridge. New plant room forms assist with this massing so that the building appears to step in both north /south and east/west orientations. Viewed from the lower levels of the rocks this massing strengthens the reading of the building’s verticality.

The additional mass is located where there will be minimal addition of overshadowing to the surrounding developments and public domain. This is largely due to the building’s north/south orientation and the exsiting shadowing cast by the existing tower form of the building and the significant height of the Harbour Bridge approach.

Proposed building massing viewed from Playfair St (note public lift in Atherden St shown indicatively - location TBC)



Diagrammatic east elevation showing proposed new building mass

Proposed east elevation

Proposed west elevation

FACADES AND MATERIALITY

Building

Generally the exposed concrete of the exsiting building is retained - the concrete will be repaired and cleaned. Precast concrete window frames are to be removed where new balconies are to be added. New windows will replace existing within the existing precast window surrounds.

Conceptually new building mass is articulated as sharply articulated copper-clad modules to ensure legibility of new work from the existing building. The balance of concrete to copper is carefully considered on the proposal. Areas of new concrete will match the colour of the existing (cleaned) concrete but will still be idenifiable as new work by a change in texture.

Other elements such as metal cladding to vertical entry lobbies are to be finished to match the dark bronze window framing of the original building.

Groundplane

New landscape walls will replace existing. The new walls will also be constructed of brickwork, of a lighter hue. These walls will be broken by metal louvred fencing to increase transparency and visual surveillance.

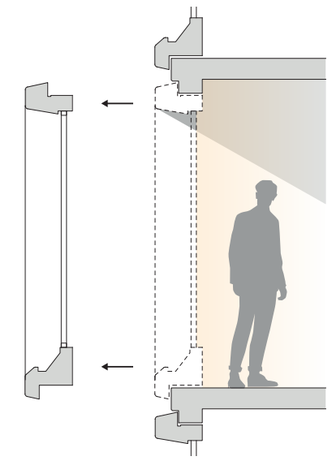
Paving selection has been made to extend the City of Sydney pavement granite into the site. Existing brick paving to Gloucester Walk will be upgraded with a new brick finish.

Balconies

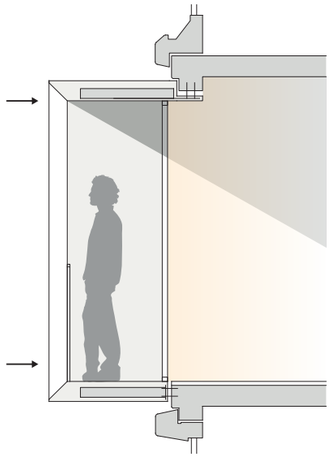
New balconies are proposed to be added - generally to existing apartments with no access to outdoor space. These are designed as lightweight modules that will replace the existing prefabricated concrete facade modules of these existing apartments.

New Window Glazing

Glazing to exsiting apartments is to be replaced within the precast surround generally with operable (double hung) glazing elements with improved thermal and acoustic performance. A hood projection is integrated with the frame design to provide additional solar shading



Removing existing precast facade module

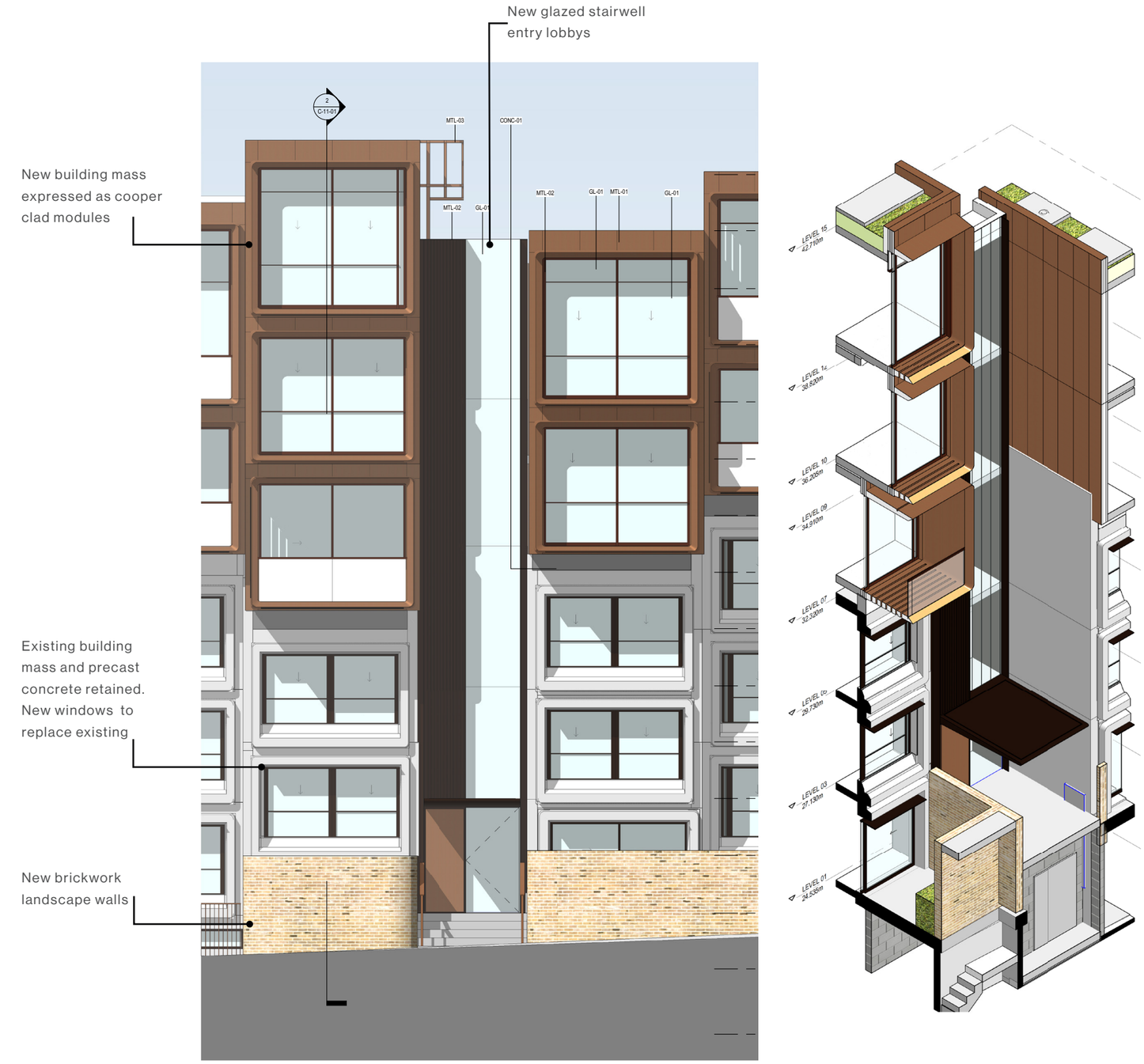


Installing new pre-fabricated balcony module

Proposed east elevation

Proposed west elevation

FACADES AND MATERIALITY



Part elevation showing facade material palette

New buildings at the groundplane

At Cumberland St a new building is proposed to incorporate vehicular entry to basement loading and parking. Above, an open frame holds a new pool level for use of residents. This building continues the material palette of concrete frame and metal additions from the main building.

Similarly along Gloucester Walk, new commercial tenancies and Soho units are expressed elementally as concrete frames. Within these, a brick base , recessed glazed infill and metal balustrades and privacy screens make up the facades of the new elements.

Cumberland St building

Gloucester walk elevation - Soho units

SERVICING

Strategies to upgrade building services to contemporary standards have been developed. These include plant and riser reticulation for air conditioning systems and plant, improved ventilation systems to lift lobbies, and fire relief systems to current standards.

A new chiller plant is located on the roof of the Cumberland St building, set back from the street edge. The form of this building is intended to continue the street wall, and the roof plant sits within the envelope of the exsiting adjoining building.

Ausgrid have advised that a suitable electricity supply up to a maximum of 400 amps/phase will be made available. To supply demand in excess of this a gas fired microturbine is provided and has been located within the basement carpark to minimise impact on the ground floor and public domain.

Additional plant required at the tower roof accommodates new lobby relief plant. New building mass has been added to the tower to ensure this plant is concealed and is consistent with the architectural expression of the existing building.

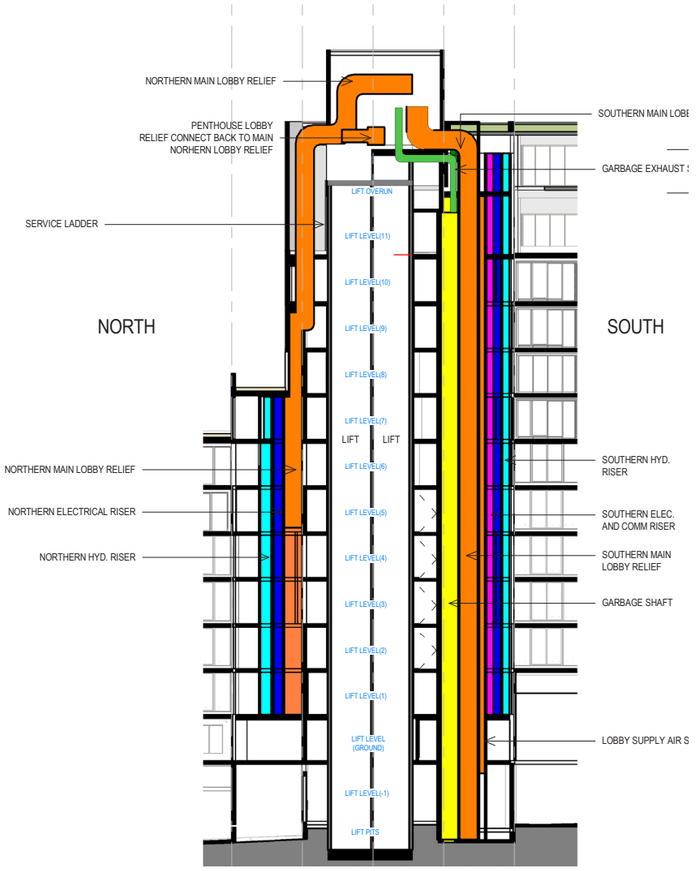
The restricted floor to floor heights in the retained apartments limit the ability to reticulate services horizontally as introducing lowered ceilings and bulkheads is not desirable. Wet areas and kitchens have been located to stack vertically as a result. The proposed servicing strategy provides additional vertical risers located to integrate into interior joinery within apartments. This will enable maximum ceiling heights but reduces the available GFA within the floorplate.

Kitchen exhaust to individual apartments is to be reticulated through the facade of each apartment. The window system has been designed to integrate required louvres.

Access and Maintenance

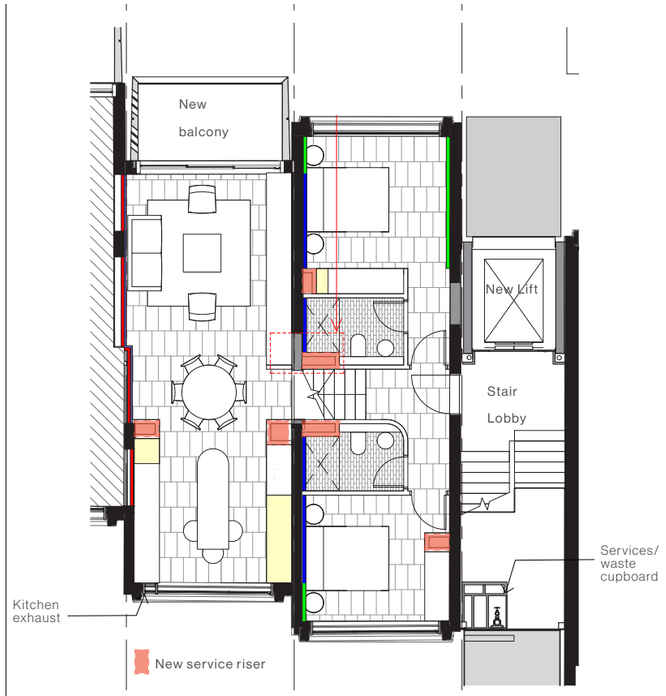
An access strategy has been developed to ensure maintenance access can be achieved to facades and roof tops. This includes access hatches from lower lobbies, anchor points and monorails, and protected ladder access.

View over Cumberland St



Typical services section through tower lobby

Typical new glazing arrangement within exsiting precast window surround



Typical apartment plan showing new services risers

WASTE COLLECTION AND LOADING

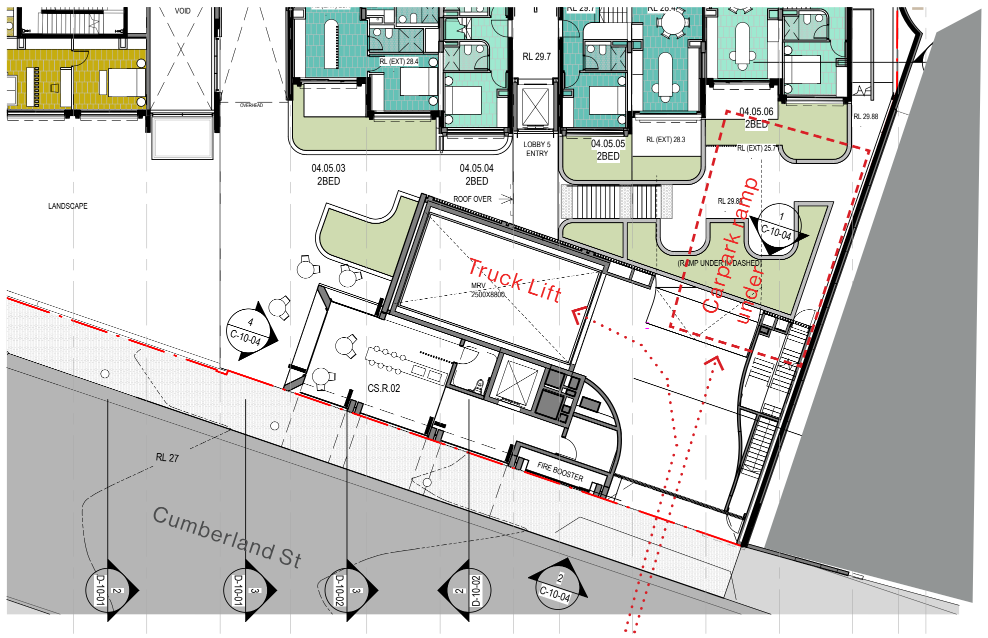
The existing car park ramp from Cumberland St is no longer compliant grading for access for garbage and loading trucks. The proposal reconfigures the access ramp providing a truck lift as an alternative and a new vehicular ramp. The lift enables connection to a lowered loading area that facilitates required truck movements and retains the number of car spaces.

A truck lift is proposed to simplify and separate entry for waste vehicles and drop off/pick up of large goods. This is positioned away from the street.

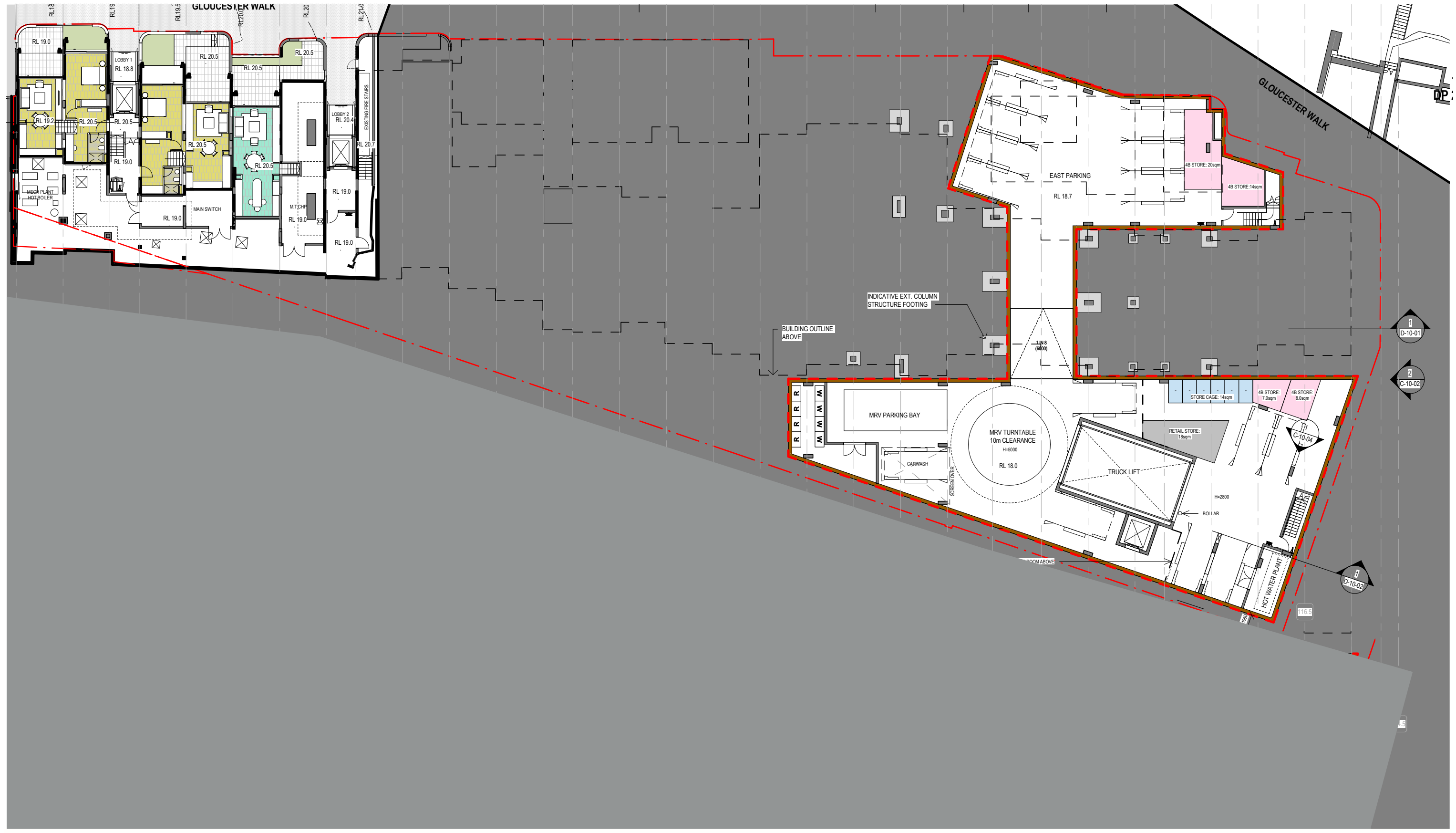
The proposal improves the Cumberland street frontage by providing a commercial building with integrated vehicular access to the site.

RESIDENT PARKING

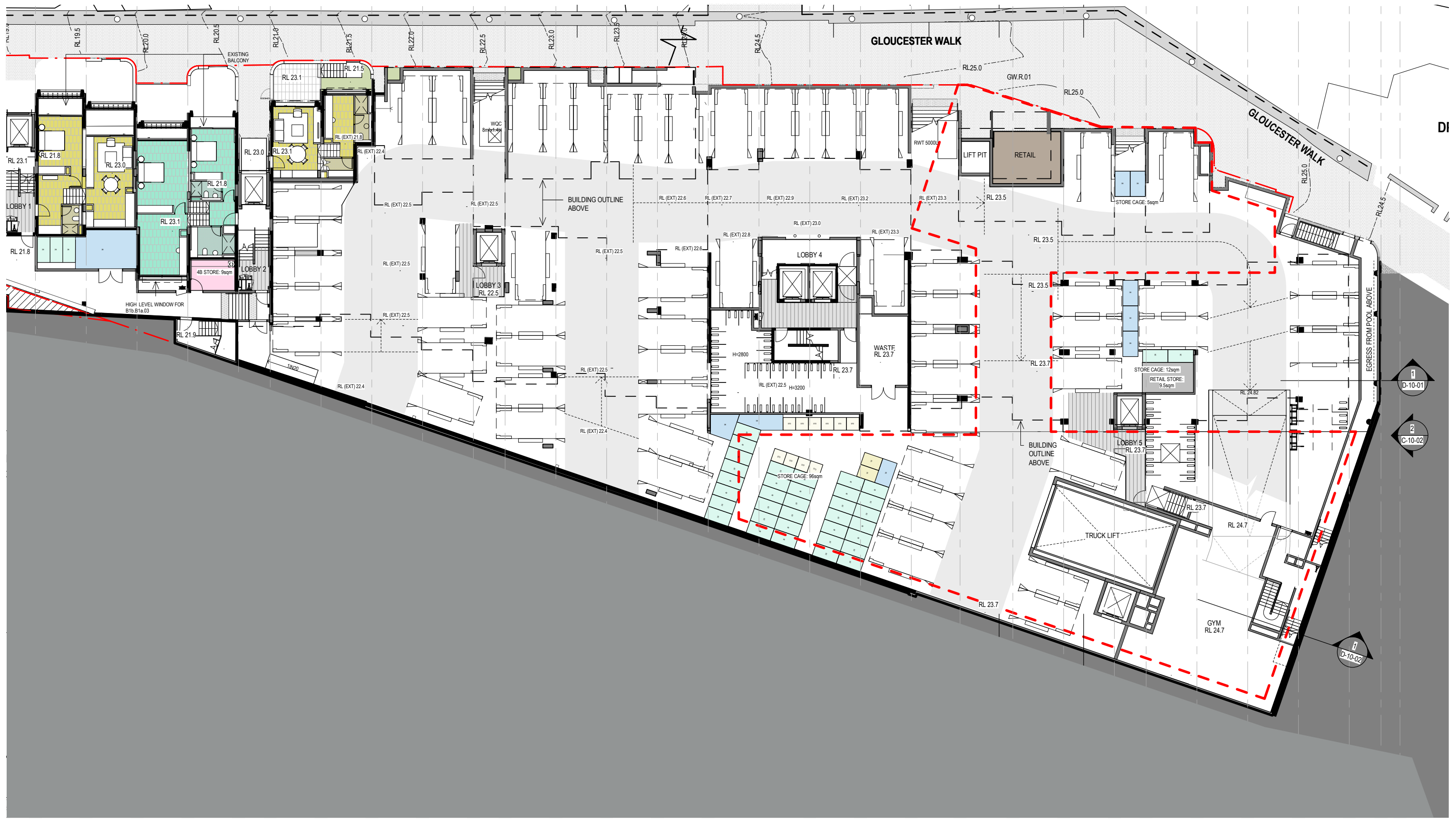
Car entry is via a dedicated ramp and to a simplified basement car park. The exsiting 70 car space count is retained.



Part plan - Cumberland Street access



Basement 2 Plan



Basement 1 Plan

SUSTAINABILITY AND LANDSCAPE

Key to the proposal's sustainability strategy is the retention and reuse of the building's concrete structure saving significantly on carbon compared to a new build.

New building mass will be clad in a copper cladding with a very high recycled material content. Landscape brickwork will incorporate recycled brickwork from the exsiting building.

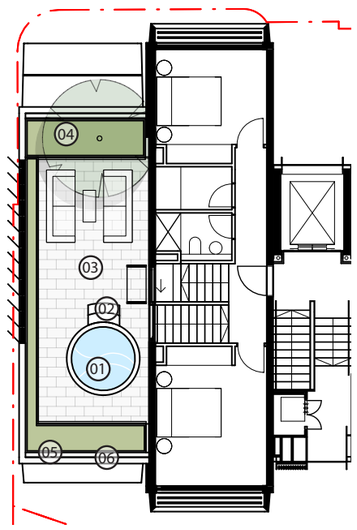
The shallow floor plates and dual aspect of the existing apartments have exceptional access to solar amenity, cross ventilation and views. Amendments to apartment layouts are proposed that will maximise these benefits and complement the expectations of the current market. Further improvements are made by adding shading balconies and projecting hoods and new windows with significantly increased environmental performance. New windows oriented to the north in the metal clad additions are screened by perforated operable panels to provide both views and solar protection.

The new glazing arrangement has been considered to maximise the available opening for natural ventilation while maintaining safety.

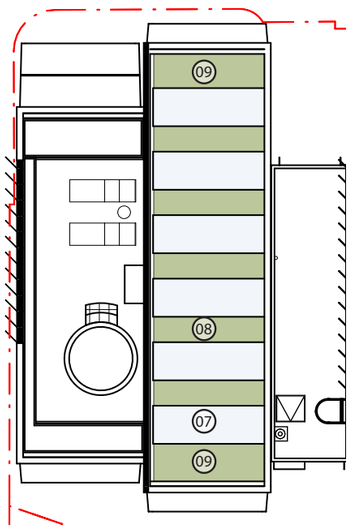
Upgrades to building services and central plant will increase the operational efficiency and reduce reliance on fossil fuels. Refer to separate ESD report prepared by Flux and included in this submission.

The building's roofs, visible from many aspects of the public domain are conceived as habitable gardens. These are landscaped with areas of deep planting to enable foliage and canopy. Where the roof are not directly accessible from apartments they are treated as green roofs with integrated solar panels. Rainwater is harvested and stored in the basement. Plant species are selected to be drought tolerant and suitable for the location. A separate Landscape Design Report is included in the SSDA submission.

Proposed roof plan



Typical habitable roof terrace plan



Typical green roof/ solar panel arrangement

LEGEND

01 Swimming pool / spa with integrate lid
02 Steps up to enter pool
03 Paving on pedestals above slab
04 Raised planter (1m soil profile) forms balustrade to parapet
05 Landscape to western parapet to provide privacy
06 Garden level with pool coping (min 1200mm to satisfy compliance within pool)
07 PV Solar Panels (laid flat)
08 Garden in Glass Reinforce Concrete (GRC) planters with low height native grasses
09 Garden in Glass Reinforce Concrete (GRC) planters with trailing species (east and west ends)

APPENDIX A

ADG COMPLIANCE REPORT

Apartment Design Guide – Design Objectives and Design Criteria

OBJECTIVE	DESIGN CRITERIA	ASSESSMENT
Part 3 Siting the Development		
Site Analysis	**Objective 3A-1** Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context	Complies. *(Excerpt from design statement)* *The proposal for the adaptive reuse of the existing Sirius building is primarily concerned with the retention of the existing building in a long-term economically sustainable manner. The adaptive reuse will result in no additional apartments from the existing and will include a number of improvements to the public domain.* *Following with the intent to 'retain with integrity ' the new building mass has been located to preserve and enhance the original concept of the building's modular composition.* *Viewlines from multiple points have been considered in the location of the proposed alterations and additions. (A separate view analysis report is included). Conceptually mass added to lower levels considers the views across the precinct to the Opera House from the Harbour Bridge pedestrian walk and reduces in scale at the northern end where the building transitions to the lower built form of the precinct.* *New mass added to the tower echoes the massing of the original building as a modulating roof line that builds to a peak at the top of the tower. At this point*

		the new copper clad additions are carefully composed with particular regard to the views from the north along the Harbour Bridge. New plant room forms assist with this massing so that the building appears to step in both north /south and east/west orientations. Viewed from the lower levels of the rocks this massing strengthens the reading of the building's verticality. *The additional mass is located where there will be minimal addition of overshadowing to the surrounding developments and public domain. This is largely due to the building's north/south orientation and the existing shadowing cast by the existing tower form of the building and the significant height of the Harbour Bridge approach.* (The site survey and the site analysis contained within the Design Report addresses the potential opportunities and constraints of the site.)
Orientation	**Objective 3B-1** Building types and layouts respond to the streetscape and site while optimising solar access within the development	Complies. *(Excerpt from design statement)* *The Rocks precinct is characterised by its stepping topography and fine-grained pedestrian character. The proposal includes a new public lift from the lower Rocks level to Gloucester Walk, and a second lift from Gloucester Walk to Cumberland St level. Combined with a new through-site link these will provide accessible connections throughout the precinct.*

Consistent with SEPP SSP, the proposal will better integrate Sirius with its context by increasing activation to its public edges:

- *As Gloucester Walk passes the Sirius site, the existing building's podium presents poorly as an inactive 100m long elevation - predominantly as security screens to its basement carpark. The proposal will focus on upgrading this elevation, inserting a mix of Soho spaces and retail tenancies with existing residential apartments.*
- *Along Cumberland St, the existing building's street activation is limited as it presents as a series of blank, high landscape walls containing courtyards, screening services ducts, fire stairs and carpark access. A new building mass is proposed to conceal the carpark access ramp, satisfactorily terminate the Cumberland St wall at a public 'square' and, provide an address and activity to Cumberland St*
- *Enclosing walls to ground floor apartments to the north of Cumberland St are proposed to be redesigned and services redistributed to allow better visibility, surveillance and activation at the street. Where possible, ground floor apartments are provided with alternate entry directly from the street.*

Edge conditions along Gloucester Walk and the carpark entry on Cumberland Street have sensitive architectural interventions to improve the building's contribution to the activation of the public realm.

New additions to the main structure are envisaged as true lightweight prefabricated pods clad in recycled

		copper to clearly articulate the new against the restored concrete of the existing building. *The existing building's orientation is aligned to a north axis creating large east and west facing glazed areas. Significant enhancements to solar gains and solar protection have been incorporated into the building design such as solar hoods, balcony extensions, balcony louvres and north facing windows and hoods. Overall these devises significantly improve the solar performance.*
	Objective 3B-2 Overshadowing of neighbouring properties is minimised during mid-winter	Complies. (Please refer to our accompanying Overshadowing Analysis.) As stated above in item 3A-1: *(Excerpt from design statement)* *the additional mass is located where there will be minimal addition of overshadowing to the surrounding developments and public domain. This is largely due to the building's north/south orientation and the existing shadowing cast by the existing tower form of the building and the significant height of the Harbour Bridge approach.*
	Objective 3C-1 Transition between private and public domain is achieved without compromising safety and security	Complies.

Public Domain **Interface**		Transition from the surrounding streets to the building entries is clearly identified by entry lobbies and landscaped paths. These lobbies are all located with entry address points off the primary address of Cumberland St and Gloucester Walk. The entries are defined as discreet single height glass lobbies, with wind mitigating canopies and entry awnings, providing a level of prominence to the residences and weather protection prior to entry. Mail box provisions are catered for at the concierge which is located centrally at the Tower (core 4). The entry doors are visible from the public domain and will incorporate appropriate access control devices. Direct street entry is provided to all apartments ground level apartments (either from Cumberland St or Gloucester Walk) allowing optimal connectivity and activation at the ground level.
	Objective 3C-2 Amenity of the public domain is retained and enhanced	Complies. *(Excerpt from Design Statement)* *An upgrade to Gloucester Walk is proposed to upgrade its surface and interfaces.* *A new public through-site link is proposed by removing one of the lower level apartments that will further enhance this permeability.*

			Improvements to the ground level landscape and lower apartment entries will significantly improve the character of the streetscape, safety and activity. New glazed lifts and stairs will improve access for residents to apartments that currently have no accessible entry. *A new retail space at the northern boundary will enhance the public park immediately adjacent that is currently in poor repair and unsafe due to lack of active surveillance and activity.*
Communal and Public Open Space	**Objective 3D-1** An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	1. Communal open space has a minimum area equal to 25% of the site (see figure 3D.3) 2. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter)	Complies (to be checked) The existing building footprint (1462.8sqm) as a % of overall site area 3664.5sqm was 39.91%). The proposed development provides for a significantly enhanced communal open space and public realm. However, the overall area is limited by the existing building and opportunities for siting the new Cumberland Building. As such the new proposed communal space provides for a total of 884.2sqm across the site, inclusive of 203.5sqm of open terrace and pool within the level 2 of the Cumberland Building.
	Objective 3D-2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting		Complies. Refer to the accompanying Landscape Plan for details and the Public Art Strategy for further details.

	Communal open space allows for a significant public square defining the forecourt entry along Cumberland St. which will provide a significant new Public Art Strategy offer to the precinct and community.
Objective 3D-3 Communal open space is designed to maximise safety	Complies. The proposed areas of communal open space are designed to be highly accessible and visible from habitable rooms and private open space areas. Direct, equitable access to the ground floor open space is provided from each residential lobby.
Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood	Complies. The existing public open space provision across both Cumberland St and Gloucester Walk was limited. The proposed amendments to the public open space proposal greatly enhance the opportunity for public engagement with this site, and further enhance and improve the connectivity across and through the site. Key to this is the introduction of the Through Site Link, which provides a connection between Cumberland St and Gloucester Walk and beyond the Rocks precinct. The forecourt along Cumberland St which connects and leads into the through site link is a significant new public space, allowing for a curated art installation. Further to the north of Cumberland St, the proposed café provides for a significant outdoor amenity which

<table>
<tr><td></td><td></td><td></td><td>will greatly improve the public open space offering at this end of the site.</td></tr>
<tr><td>Deep Soil Zones</td><td>Objective 3E-1 Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality</td><td>Deep soil zones are to meet the following minimum requirements:

<table><tr><th>Site Area</th><th>Min. Dimensions</th><th>Deep soil zone (% of site area)</th></tr><tr><td>Less than 650m^2</td><td>-</td><td>7%</td></tr><tr><td>650m^2 – 1500m^2</td><td>3m</td><td></td></tr><tr><td>Greater than 1500m^2</td><td>6m</td><td></td></tr><tr><td>Greater than 1500m^2 with significant tree cover</td><td>6m</td><td></td></tr></table></td><td>Partially Complies (Exceeds Existing Condition)

Refer to our accompanying Deep Soil Zones analysis on drawing sheet AR-T-30-11-ADG PART 3E - DEEP SOIL().

A total of 25.6sqm (0.7%) of deep soil landscaping is proposed within the development site.

The deep soil zones are significantly restricted by the existing extent of basement area covering the site, and the limited areas outside of this footprint that are practicably able to provide a deep soil provision.

The deep soil area total has increased from the existing site area.</td></tr>
<tr><td>Visual Privacy</td><td>Objective 3F-1 Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy

Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room</td><td>Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:

<table><tr><th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></tr><tr><td>Up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr><tr><td>Up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr><tr><td>Over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr></table></td><td>Complies.

Refer to our accompanying Site Plan and Building Separation drawings.

The existing building is sited such that equitable separation distances between existing neighbouring buildings are maintained.

New building masses along Gloucester Walk are only 1 level in building height and are more than 6m away from neighbouring habitable rooms.</td></tr>
</table>

		The new building mass to Cumberland St has a zero setback to the adjacent commercial building, however this is a non-residential building use. On-site separation distances between the Cumberland Building and the residential apartments within the existing building are approximately 4m separated. This separation is only for the 3 levels of the Cumberland building and is therefore greater than the 3m requirement for habitable to blank wall separation.
	Objective 3F-2 Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space	Complies. The existing building has already configured an arrangement of ground level apartments and courtyards which provide a significant level of privacy to the public realm, footpaths and adjacent streets. The proposed scheme enhances the ground level amenity, private open space, and privacy, whilst improving access to light and outlook. A number of ground level apartments have introduced double height living spaces to improve the access to natural daylight. Private courtyards have been enhanced by the inclusion of palisade fencing to specific locations, which allows screened outlook and improved

		landscape activation, beyond what was previously a series of blank austere brick walls to the public realm. All ground level apartments are provided with a minimum of a 1500mm-high screened permeable fence or brick enclosing courtyard wall.
Pedestrian Access and Entries	**Objective 3G-1** Building entries and pedestrian access connects to and addresses the public domain	Complies. As per 3C-1, direct street access to central lobbies is provided. As per 3C-1, direct street entry is provided to all Ground Level dwellings, with visually permeable front gates provided.
	Objective 3G-2 Access, entries and pathways are accessible and easy to identify	Complies. As per 3C-1, direct street access to each of the five residential lobby locations is provided from both the primary address along Cumberland St and the pedestrian pathway Gloucester Walk. The entries are defined as full height glass lobbies, with wind mitigating canopies and entry awnings, providing a level of prominence to the residences and weather protection prior to entry. As the entry lobbies are dual facing onto both Cumberland St and Gloucester Walk, the lift and stair configuration typical provides a glazed vestibule to the lift lobby, whilst creating a stair vestibule and lobby on the opposing side. Mail box facilities are centrally located within the main reception foyer (referred to as Core 4) within the tower footprint. Separate external access to the mail room is provided for Australia Post mail services.

	Objective 3G-3 Large sites provide pedestrian links for access to streets and connection to destinations	Complies. Refer to our accompanying Site Plan. The proposal includes a new lift from Gloucester Walk to Cumberland Street level. Combined with a new through-site link this will provide improved accessible connections throughout the precinct.
Vehicle Access	**Objective 3H-1** Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes	Complies. Refer to our accompanying Site Plan on drawing sheet AR-A-00-03-SITE PLAN(). *(Extract from Design Statement)* *The existing ramp to the basement carpark does not meet current standards due to its steepness transition grades and a new complying ramp is shown in the proposal with a separate vehicle lift for truck use.* *A new building is proposed at Cumberland St to enclose the vehicle lift and carpark ramp, conceal cooling tower plant, and contain a new cafe and pool for residents.* A single vehicle entry point is located on Cumberland Street. The vehicle entry point is incorporated into the building form of Cumberland building, with adequate provision of a vehicular ramp direct to the B1 level, whilst also providing a truck lift provision for use by Waste Collection and Removalist companies. To minimise its visual impact. the truck lift and vehicular ramp share the same street entry point,

			minimising the distance of pedestrians crossing over vehicular traffic paths. The entry point provides for a dedicated 2 lanes (1 entry / 1 exit). (Refer to the Civil and Traffic Engineer's report for further details.)
Bicycle and Car Parking	**Objective 3J-1** Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas	For development in the following locations: • on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or • on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less The car parking needs for a development must be provided off street.	Complies. Vehicle parking is provided for the development within basement levels, primarily within the B1 level. • A total of 70 car parking spaces for residents is proposed. Refer to the Traffic Report for further details.
	Objective 3J-2 Parking and facilities are provided for other modes of transport		Complies. Bicycle parking is allocated at the Basement level B1, allowing for safe access and circulation of bicycle users.
	Objective 3J-3 Car park design and access is safe and secure		Complies. Access to the basement levels will require remote control access and motion sensor lights will be installed.
	Objective 3J-4 Visual and environmental impacts of underground car parking are minimised		Complies.

			Due to the site terrain, the existing carpark was submerged below Cumberland St, but exposed for a significant portion of the Gloucester Walk pedestrian streetscape. The proposed alterations and site development fully enclose the basement from external visibility, and is fronted by retail, sohos, and landscape to the entire Gloucester Walk frontage.
	Objective 3J-5 Visual and environmental impacts of on-grade car parking are minimised		Complies. The vehicle access point has been designed to be incorporated into the overall building form of the Cumberland building. This allows a greater provision of ground level landscape / private domain for the residents. On-grade parking within the site boundary is not provided. Existing street carparking (which is outside of the scope of this project) remains unchanged, apart from the reposition of the vehicular entry point.
	Objective 3J-6 Visual and environmental impacts of above ground enclosed car parking are minimised		N/A
Solar and Daylight Access	**Objective 4A-1** To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	Complies. Refer to our accompanying Solar Access analysis. Total Apartments = 76 Apartments meeting criteria = 53 Proportion meeting criteria = 69.7% (70% rounded)

	2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter	N/A
	3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter	Complies. Only 2 apartments (out of a total of 76 apartments) do not receive direct daylight at mid-winter. This represents a proportion of 2.6%
Objective 4A-2 Daylight access is maximised where sunlight is limited		Complies. The proposal has been designed to maximise sunlight access. This is achieved through the use of crossover through apartments, allowing solar access from both the east and the west along with extensive full height glazing to new apartment bay windows, glass balustrading and the like. Additional windows have been added to previously blank north and south concrete walls, increasing the provision of sunlight to apartments even further. Whilst balconies have been added to provide adequate external amenity, the articulation and detailing has been carefully considered incorporating louvred side walls which gain additional solar access to apartments and external balcony areas.
Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months		Complies. The BASIX Certificate identifies that the proposed development achieves the required thermal comfort levels for a development of this scale.

			The development incorporates 450mm sun hoods to all existing window bays. In addition, all new pods provide a balcony or hooded module articulation. All north facing windows including new windows introduced into the existing concrete walls have been provided with sun hoods. Operable perforated louvre panels also provide north facing solar shading and glare control.
Natural Ventilation	**Objective 4B-1** All habitable rooms are naturally ventilated		Complies. All habitable rooms have an unobstructed window opening of at least 5% of the floor area served.
	Objective 4B-2 The layout and design of single aspect apartments maximises natural ventilation		Complies. The proposal reconfigures existing apartments to maximise their unique dual aspect and integrate required new services. Apartment depths for single aspect apartments are minimised, and open plan layouts are preferred. Existing apartments are amalgamated horizontally as indicated which will reduce the number of single-sided 1-bedroom apartments higher in the tower that currently have limited ventilation and high exposure to western sun.
	Objective 4B-3 The number of apartments with natural cross ventilation	1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building.	Complies. Refer to our accompanying Natural Ventilation analysis.

	is maximised to create a comfortable indoor environment for residents	Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed	Total Apartments = 76 Total Apartments (9 storeys) = 71 Apartments meeting criteria = 57 Proportion meeting criteria = 80.3%
		2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	Complies. Cross-through apartments are approximately 13-15m deep maximum measured glass to glass.
Ceiling Heights	**Objective 4C-1** Ceiling height achieves sufficient natural ventilation and daylight access	Measured from finished floor level to finished ceiling level, minimum ceiling heights are:	New Build Complies. All new build residential apartment modules have a minimum ceiling height of 2.7m in habitable rooms and apartment layouts have been designed to provide spacious, well-proportioned rooms. Existing Building Non-Compliant Due to the existing building structure, apartments located within the existing buildings modules have a ceiling height typically of approx 2.42m although this does vary in specific locations across the existing building.

Minimum ceiling height for apartment and mixed use buildings	
Habitable Rooms	2.7m
Non-Habitable	2.4m
For 2 Storey Apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area
Attic Spaces	1.8m at edge of room with a 30 degree minimum ceiling slope
If located in mixed use areas	3.3m for ground and first floor to promote future flexibility of use

Objective 4C-2 Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms	Complies. Due to the existing nature of the building, there is a clearly defined expression of a modular expression, and elongated modular format. New build residential apartment modules maintain this expression, however, have increased ceiling heights to 2.7m and beyond create a more expansive proportion and amenity.

	Objective 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building		N/A Existing ceiling heights are limited by the existing building structure. Conversion to other uses would be prohibitive due to the specific configuration of the existing building.
Apartment Size and Layout	**Objective 4D-1** The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity	1. Apartments are required to have the following minimum internal areas: Apartment Types / Minimum Internal Area Studio / 35m³ 1 bedroom / 50m³ 2 bedroom / 70m³ 3 bedroom / 90m³ The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each. A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m² each.	Complies. Refer to accompanying Floor Plans which indicate apartment calculated sizes.
		2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms	Complies. All habitable rooms have a window in an external wall of at least 10% of the floor area served.
	Objective 4D-2 Environmental performance of the apartment is maximised	1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height	Generally Complies. Due to the existing building structure, apartments located within the existing buildings modules have a ceiling height typically of approx 2.42m although this

		does vary in specific locations across the existing building. However due to the apartment planning configurations, most apartments are through apartments will dual aspect living / dining / kitchen spaces, which provides a compliant room depth. The only exceptions are apartment layout types 2A (example is 12.13.02 and 12.13.03) which are single sided living rooms with an overall depth of 8.3m from existing façade glazed line to rear kitchen cabinetry. This is restricted by the position of the exiting lift core.
	2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	Generally Complies. See note above to item 4D-2
Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs	1. Master bedrooms have a minimum area of $10m^2$ and other bedrooms $9m^2$ (excluding wardrobe space)	Complies.
	2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	Complies.
	3. Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments • 4m for 2 and 3 bedroom apartments	Complies.
	4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	Non-Compliant. The existing building limits the face to face width of “cross-over” apartments typically around 3.5 to 3.8m wide.

			In order to maintain the architectural order of the existing building, new pod modules align to this existing setout and therefore also have reduced modular widths. However, this has been overcome in many instances, via the proposed apartments combining a number of modules to increase the overall width and amenity of habitable living spaces.
Private Open Space and Balconies	**Objective 4E-1** Apartments provide appropriately sized private open space and balconies to enhance residential amenity	1. All apartments are required to have primary balconies as follows: Dwelling type / Minimum Area / Minimum Depth Studio / 4m³ / - 1 bedroom / 8m³ / 2m 2 bedroom / 10m³ / 2m 3+ bedroom / 12m³ / 2.4m The minimum balcony depth to be counted as contributing to the balcony area is 1m	Complies. Refer to accompanying Floor Plans which indicate balcony or patio circulated areas. New balconies typically have a minimum depth of 1.5 to 2m with some Juliet balconies at 1m depth. Each apartment is provided with at least one balcony that has been designed so that it can accommodate a table setting in accordance with the diagrams provided in the ADG. There is also a 0.5sqm allowance above minimum areas, to allow for balcony located AC units and these are indicated on the architectural floor plans.
		2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m² and a minimum depth of 3m.	Complies. Ground level apartments have patios greater than this criteria.
	Objective 4E-2 Primary private open space and balconies are appropriately located to enhance liveability for residents		Complies. The existing building incorporated several existing balcony locations, which do not meet size

		requirements under current ADG and liveability standards. The proposal has enhanced the size of existing balconies through apartment configurations, façade / glass line adjustments and where necessary, provided additional new prefabricated balconies. Balconies enjoy expansive views and solar access, predominantly east or west towards harbour views, and adjacent city views.. New balconies are provided to apartments which currently have no access to outdoor area or are undersized. These provide a secondary benefit to the amenity of the apartments providing shading and visual privacy. As a result, all apartments have been upgraded to include private external space compliant, and well in excess of ADG minimum guidelines.
	Objective 4E-3 Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building	Complies. Balconies contribute to the façade articulation and detailed reading of the new additions to this existing building. New balcony additions are clearly identifiable as new copper prefabricated elements. New balconies are proposed to be added - generally to existing apartments with no access to outdoor space. These are designed as lightweight modules that will replace the existing prefabricated concrete facade modules of these existing apartments.

	Objective 4E-4 Private open space and balcony design maximises safety		Complies. All balconies comprise balustrades of 1.2m in height to ensure safety is maintained.
Common Circulation and Spaces	**Objective 4F-1** Common circulation spaces achieve good amenity and properly service the number of apartments	1. The maximum number of apartments off a circulation core on a single level is eight	Complies. Refer to AR-T-40-30-ADG PART 4F_Street Lift Access drawing. Each level is served by a lift and stairs. The maximum number of apartments being accessed by a single lift is 2 apartments (within podium Cores 1,2,3 and 5) The tower core 4 provides 2 x lifts to access a maximum of only 5 apartments per floorplate (reducing to 1 apartment per floorplate at the upper levels).
		2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	Complies. The main tower area of the building (served by core 4) is measured as 13 flat floor levels. This is the only core in excess of 10 storeys tall. This core has 2 lifts provided and serves a maximum of only 6 apartments per floorplate. Core 01 ratio = 1 lifts / 11 apts total (1 per split floor maximum) (11.0 apt/lift ratio) Core 02 ratio = 1 lifts / 12 apts total (1 per split floor maximum) (12.0 apt/lift ratio) Core 03 ratio = 1 lifts / 6 apts total (1 per split floor maximum) (6.0 apt/lift ratio)

			Core 04 ratio = 2 lifts / 37 apts total (2 per floor maximum) (20.5 apt/lift ratio) Core 05 ratio = 1 lifts / 7 apts total (2 per floor maximum) (7.0 apt/lift ratio)
	Objective 4F-2 Common circulation spaces promote safety and provide for social interaction between residents		Complies. Open circulation stairs to podium apartments are especially open, with glass facades to either end, allowing open, safe and social interaction between residents.
Storage	**Objective 4G-1** Adequate, well designed storage is provided in each apartment	In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: Dwelling Type / Storage size volume Studio / $4m^3$ 1 bedroom / $6m^3$ 2 bedroom / $8m^3$ 3+ bedroom / $10m^3$ At least 50% of the required storage is to be located within the apartment	Complies. Refer to accompanying Storage schedule. At least 50% of the required storage is located within each apartment.
	Objective 4G-2 Additional storage is conveniently located, accessible and nominated for individual apartments		Complies. Additional storage is provided in a secure basement storage area located at the rear of an allocated parking space, or in dedicated storage zones within the basement directly adjacent to residents lift core.

Acoustic Privacy	**Objective 4H-1** Noise transfer is minimised through the siting of buildings and building layout	Complies. The existing building is sited directly adjacent to the Sydney Harbour Bridge and there are significant acoustic impacts from this source. As such, the additional new proposed building mass is also impacted significantly by this, and its siting is limited by the existing building. An Acoustic Noise Impact Assessment Report has been prepared.
	Objective 4H-2 Noise impacts are mitigated within apartments through layout and acoustic treatments	Complies. Living areas and bedrooms are generally located away from common areas.
Noise and Pollution	**Objective 4J-1** In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings	Complies. Refer to Acoustic Engineer's report.
	Objective 4J-2 Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission	Complies. The proposal will comply with all relevant Australian Standards relating noise transmission and the recommendations in the Acoustic Impact Report.
Apartment Mix	**Objective 4K-1** A range of apartment types and sizes is provided to cater for different household types now and into the future	Complies. The proposed development includes a range of apartment types and sizes to strengthen the diversity of residential accommodation in this local context. The close proximity of significant urban context, functions, and transport opportunities allows a range of types and sizes of apartments to be provided to the market.

	Objective 4K-2 The apartment mix is distributed to suitable locations within the building	Complies. Larger apartments are typically located on higher levels and or prominent ends of the existing building. The distribution of adaptable and liveable apartments is concentrated within the main tower form. This is a result of the existing buildings split level configuration.
Ground Floor Apartments	**Objective 4L-1** Street frontage activity is maximised where ground floor apartments are located	Complies. All ground level apartments have direct courtyard access from the public street frontage (either Cumberland St or Gloucester Walk) and in many instances have an elevated view overseeing the public footpath (providing passive surveillance.) The courtyards have been designed to maintain privacy to the residents, with a combination of brick courtyard wall and palisade screen fencing which provides privacy, as well as a degree of passive surveillance.
	Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents	Complies. Refer to accompanying Floor Plans for detail regarding the ground level apartment layouts. Private courtyards and landscape edges provide a clear and legible, safe and active ground level frontage to residents.
Facades	**Objective 4M-1** Building facades provide visual interest along the street while respecting the character of the local area	Complies. Generally, the exposed concrete of the existing building is retained - the concrete will be repaired and cleaned. Precast concrete window frames are to be removed where new balconies are to be added. New

		windows will replace existing within the existing precast window surrounds. Conceptually new building mass is articulated as sharply articulated copper-clad modules to ensure legibility of new work from the existing building. The balance of concrete to copper is carefully considered on the proposal. Areas of new concrete will match the colour of the existing (cleaned) concrete but will still be identifiable as new work by a change in texture. Other elements such as metal cladding to vertical entry lobbies are to be finished to match the dark bronze window framing of the original building.
	Objective 4M-2 Building functions are expressed by the facade	Complies. Lobbies and apartment layouts are legible and expressive within the façade design. Retail spaces and common facilities are also defined and expressed in contrast to the residential apartments.
Roof Design	**Objective 4N-1** Roof treatments are integrated into the building design and positively respond to the street	Complies. The existing building articulated a stepped profile building mass and form. This series of stepped terraces and roofs form a dynamic skyline profile and exemplify the unique character of the existing Sirius building. The roof terraces are a combination of occupied private residential terraces, and non-accessible landscaped rooftops.

		The landscape rooftops also provide an enhanced environmental performance via the inclusion of PV panels to all non-trafficable rooftops.
	Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximised	Complies. See previous note responding to 4N-1
	Objective 4N-3 Roof design incorporates sustainability features	Complies. See previous note responding to 4N-1
Landscape Design	**Objective 4O-1** Landscape design is viable and sustainable	Complies. A landscape plan is included which incorporates sustainable environmental design and landscaping to the site.
Planting on Structures	**Objective 4P-1** Appropriate soil profiles are provided	Complies. Minimum soil depths have been incorporated as per table 5 of the ADG. Refer to Landscape Architect's report and drawings.
	Objective 4P-2 Plant growth is optimised with appropriate selection and maintenance	Complies. Refer to Landscape Architect's report and drawings.
	Objective 4P-3 Planting on structures contributes to the quality and amenity of communal and public open spaces	Complies. Rooftop planting is not a part of the communal and public open spaces, however, planting to roofs (including non-accessible areas) is maximised across all roofscapes, improving the overall outlook and quality of the development.

		Refer to Landscape Architect's report and drawings.
Universal Design	**Objective 4Q-1** Universal design features are included in apartment design to promote flexible housing for all community members	Complies. Refer to our accompanying Floor Plans and Apartment Mix schedule which identify adaptable and liveable apartment allocation Also refer to the accompanying DA Access Review.
	Objective 4Q-2 A variety of apartments with adaptable designs are provided	Complies. Refer to our accompanying Floor Plans and Apartment Mix schedule which identify adaptable and liveable apartment allocation Also refer to the accompanying DA Access Review.
	Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs	Complies. All apartments are generously sized to maximise amenity and allow future flexibility for reconfiguration or adaptability.
Adaptive Reuse	**Objective 4R-1** New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place	*Complies.* *(Excerpt from design statement)* *Following with the intent to 'retain with integrity ' the new building mass has been located to preserve and enhance the original concept of the building's modular composition.* *Viewlines from multiple points have been considered in the location of the proposed alterations and additions. (Visual Impact Assessment has been prepared by GMU and is appended to this application).*

Conceptually mass added to lower levels considers the views across the precinct to the Opera House from the Harbour Bridge pedestrian walk and reduces in scale at the northern end where the building transitions to the lower built form of the precinct.

New mass added to the tower echoes the massing of the original building as a modulating roof line that builds to a peak at the top of the tower. At this point the new copper clad additions are carefully composed with particular regard to the views from the north along the Harbour Bridge. New plant room forms assist with this massing so that the building appears to step in both north /south and east/west orientations. Viewed from the lower levels of The Rocks this massing strengthens the reading of the building's verticality.

The additional mass is located where there will be minimal addition of overshadowing to the surrounding developments and public domain. This is largely due to the building's north/south orientation and the existing shadowing cast by the existing tower form of the building and the significant height of the Harbour Bridge approach.

The balance of concrete to copper is carefully considered on the proposal. While similar in form the majority of the new mass is articulated in a new metal finish that identifies the contemporary additions. Areas of new concrete will match the colour of the existing (cleaned) concrete but will still be identifiable as new work by a change in texture.

	Objective 4R-2 Adapted buildings provide residential amenity while not precluding future adaptive reuse	N/A The form and configuration of the building would be restrictive to future non-residential uses.
Mixed Use	**Objective 4S-1** Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement	Complies. The development appropriately located active street frontages along Cumberland St and Gloucester Walk. The addition of the through site link strengthens the connectivity between Cumberland St and Gloucester Walk, which subsequently enhances the activation of the site and surrounds. In addition, the café to the north of the site creates an additional activation point and public engagement with the site.
	Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	
Awnings and Signage	**Objective 4T-1** Awnings are well located and complement and integrate with the building design	Complies. The entries to residential lobbies are defined as glass lobbies (typically full building height to all podium lobbies), with wind and rain mitigating canopies and entry awnings, providing a level of prominence to the residences, visibility and legibility and weather protection prior to entry. Awnings are also provided to all active frontages for retail tenancies along Cumberland Street, and smaller appropriately scaled awnings are provided within the retail tenancies along Gloucester Walk.

	Objective 4T-2 Signage responds to the context and desired streetscape character	Complies. Building identification signage is incorporated into the lobby design and wayfinding strategy.
Energy Efficiency	**Objective 4U-1** Development incorporates passive environmental design	Complies. A BASIX Certificate is included which identifies that the proposed development achieves the required levels of thermal comfort for a development of this scale. The development incorporates such passive environmental features such as "sun hoods" which reduce the excessive solar gains in peak summer. Thermal envelope improvements enhance the insulative performance of the building envelope and reduce winter heat loss. Most apartments are also provided with cross ventilation to assist with passive air flow and reduce summer heat gains.
	Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer	Complies. Refer to the BASIX Certificate and ESD Report. Improvements are made by adding shading balconies and projecting hoods and new windows with significantly increased environmental performance. New windows oriented to the north in the metal clad additions are screened by perforated operable panels to provide both views and solar protection. Thermal enhancements to the existing building façade fabric will greatly improve the insulative performance of the existing building.
	Objective 4U-3 Adequate natural ventilation minimises the need for mechanical ventilation	Complies.

		Natural and cross-ventilation to all apartments are maximised. Cross-ventilation to all common areas is maximised. Refer to accompanying BASIX report.
Water Management and Conservation	**Objective 4V-1** Potable water use is minimised	Complies. Rainwater is collected and re-used, with low water use plants. Refer to accompanying BASIX report and Landscape Architect's report and drawings.
	Objective 4V-2 Urban stormwater is treated on site before being discharged to receiving waters	Complies. Refer to Civil Engineer and Landscape Architect's report and drawings.
	Objective 4V-3 Flood management systems are integrated into site design	Complies. Refer to Civil Engineer's report and drawings.
Waste Management	**Objective 4W-1** Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	Complies. A Site Waste Management Plan is included which outlines waste avoidance, minimisation and management strategies intended to be implemented as part of the residential and retail development. The proposed development can accommodate the required volumes, with all apartment collection points for podium apartments located locally within each core. The tower (core 4) provides a central garbage chute which diverts to a central collection point located discreetly within the basement B1 level.

		Waste holding and collection is managed at the B2 level.
	Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling	Complies. Communal waste and recycling facilities are provided. Refer to Waste Management report.
Building Maintenance	**Objective 4X-1** Building design detail provides protection from weathering	Complies. Movement joints, weatherproofing seals and drip lines are integrated into the façade design.
	Objective 4X-2 Systems and access enable ease of maintenance	Complies. Safe access is provided to all roof and plant areas. Latch points for abseiling are provided to all roofs. External maintenance access points are reached via safe internal lift and stairwell locations.
	Objective 4X-3 Material selection reduces ongoing maintenance costs	Complies. Robust materials such as concrete, copper, bronze aluminium and glass, and natural materials such as brick, have been selected and nominated where appropriate. Refer to our accompanying Material Board.