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 rowspan="4">7%</td></tr><tr><td>650m^2 – 1500m^2</td><td>3m</td></tr><tr><td>Greater than 1500m^2</td><td>6m</td></tr><tr><td>Greater than 1500m^2 with significant tree cover</td><td>6m</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>
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		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.