

CASE STUDY

Illume Apartments, Little Bay, Sydney



Views for miles
The Illume apartments enjoy views from the city to Kurnell, which has driven a hard-working plan; nearly all apartments not only have access to outlook, but also enjoy winter sunlight and natural cross-ventilation.
All images: Brett Boardman Photography, unless otherwise noted.

An assured and well-crafted residential apartment development that harnesses the natural attributes of the sensitive coastal site to deliver exceptional living quality

QUICK FACTS

APARTMENT BUILDING TYPE: Courtyard apartments	PROJECT TEAM: ARCHITECT (DESIGN + DA) Tony Caro Architecture ARCHITECT (DD + DOCS) MAKO Architecture LANDSCAPE ARCHITECT (DESIGN) McGregor Coxall LANDSCAPE ARCHITECT (CONSTRUCTION) Arcadia Landscape Architecture TOWN PLANNER Urbis
LOCATION: Little Bay, NSW, Urban	BUILDING CODE ADVICE Blackett Maguire + Goldsmith STRUCTURAL ENGINEER Robert Bird Group FACADE ENGINEER Inhabit
COUNTRY: Kameygal	SERVICES ENGINEER Donnelley Simpson Cleary ELECTRICAL ENGINEER Evolved Engineering SUSTAINABILITY Cundall
LOCAL GOVERNMENT AREA: Randwick City Council	BUILDER Richard Crookes Constructions
ZONING: R1 General Residential	AWARDS: 2019 AIA NSW, Residential Architecture – Multiple Housing, short list
APPLICABLE CONTROL: 2002 Residential Flat Design Code (RFDC)	
CLIENT: TA Global	
PROCUREMENT: Design and construct, architectural services throughout	
PROJECT DATA: Site area 9,409 m ² Floor space ratio 1.54:1 179 apartments (81 x 1B, 83 x 2B, 15 x 3B) 5 storeys 226 car parking spaces 81 bicycle parking spaces (63 + 179 storage cages for residents)	
SITE DENSITY: 190 dwellings/ha	
YEAR: Completed 2018	



The courtyard form maximises the number of apartments that benefit from natural cross-ventilation and midwinter solar access, while at the same time creating protected and beautiful communal outdoor spaces that enhance the sense of place for residents.

Materials throughout are selected for their ability to withstand the harsh coastal environment

The southern building takes a different form to the courtyard types, to suit the tapered site

Building entries are clearly signified by breaks in the built form, connected through to internal courtyards

The form at the end of the courtyard wings is carefully shaped to capture views to the east but retain privacy

The top floor is set back from the main envelope to reduce perceived scale, and to create a distinctive roof element

Breaks in the floor plan aligned with the end of open corridors allow views beyond the building from the courtyard interior

The through-site link is aligned with the street grid beyond to improve walkability & permeability

Direct street entries are provided to ground floor apartments

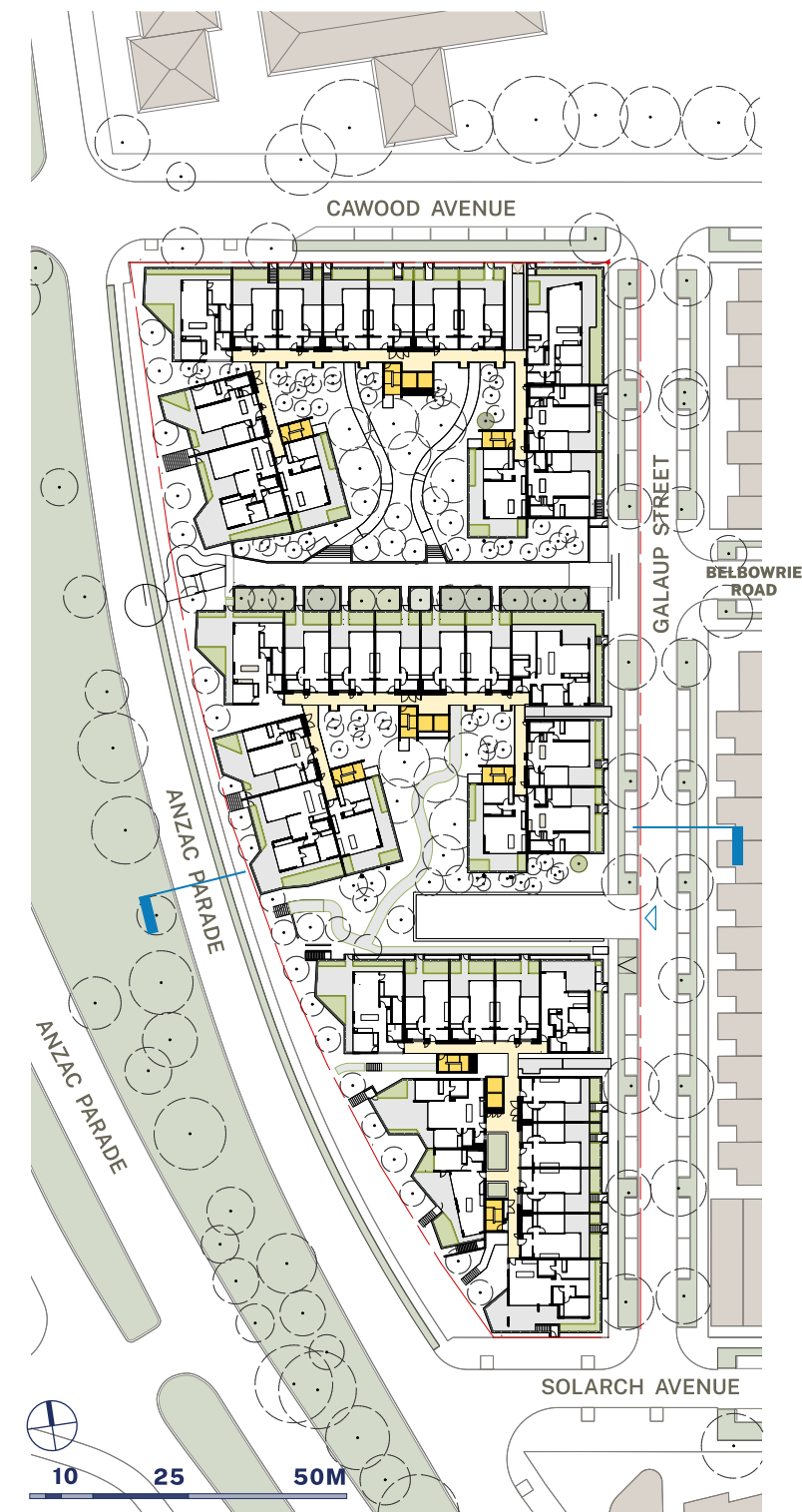
Deep soil embankments to Anzac Parade form a protective landscape softening

The basement is carefully planned so deep soil voids support planting in the courtyard

Axonometric view from the north-west
Image: Tony Caro Architecture, MAKO Architecture.



Location plan. Image: Nearmaps



Ground floor plan



Public walking
A public through-site link aligns with Belbowrie Road beyond to create a walkable neighbourhood.



Street interface
Direct access is provided for ground floor apartments, either from the street or from the link.

Responding to place was central to the design and development of the building from the outset.

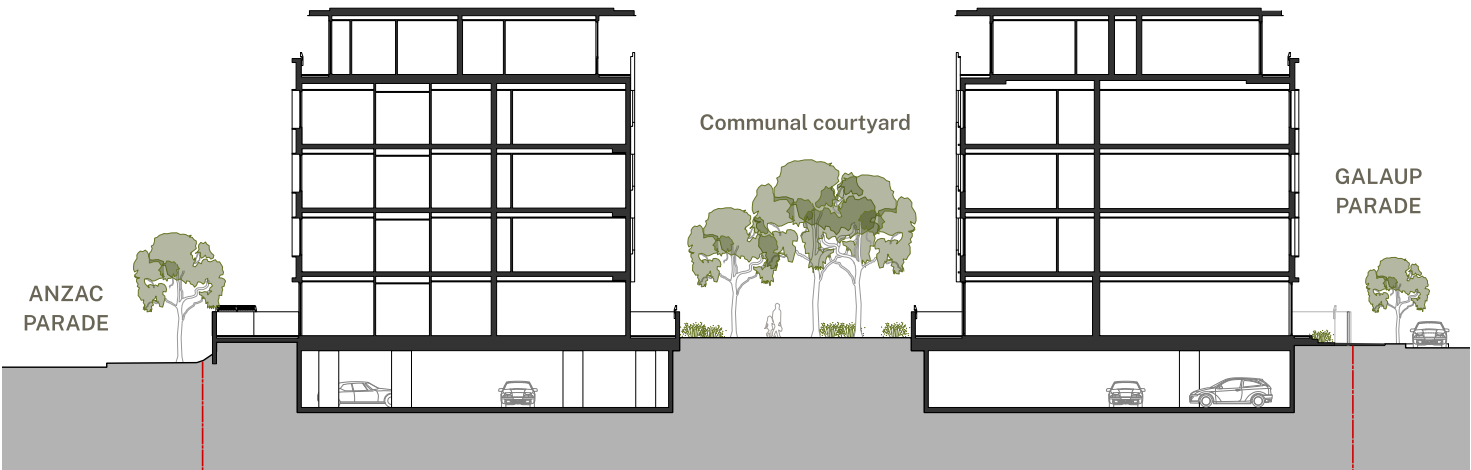
Illume was the first stage of a larger master planned redevelopment site in a suburban coastal setting, located on the prominent entry to the precinct from Anzac Parade. The long north-south axis and proximity to a major roadway presented specific site-planning issues, and a wide range of building envelope options were considered.

The built scheme comprises 3 slim buildings of 5 storeys over a shared single-level basement car park. The northern and central buildings are formed as C-shaped courtyard apartment buildings; the southernmost building is more compact, being shaped to fit the tapering geometry of the site. All buildings strongly define the long eastern and western street edges; north-facing components crossing through the block maximise solar access.

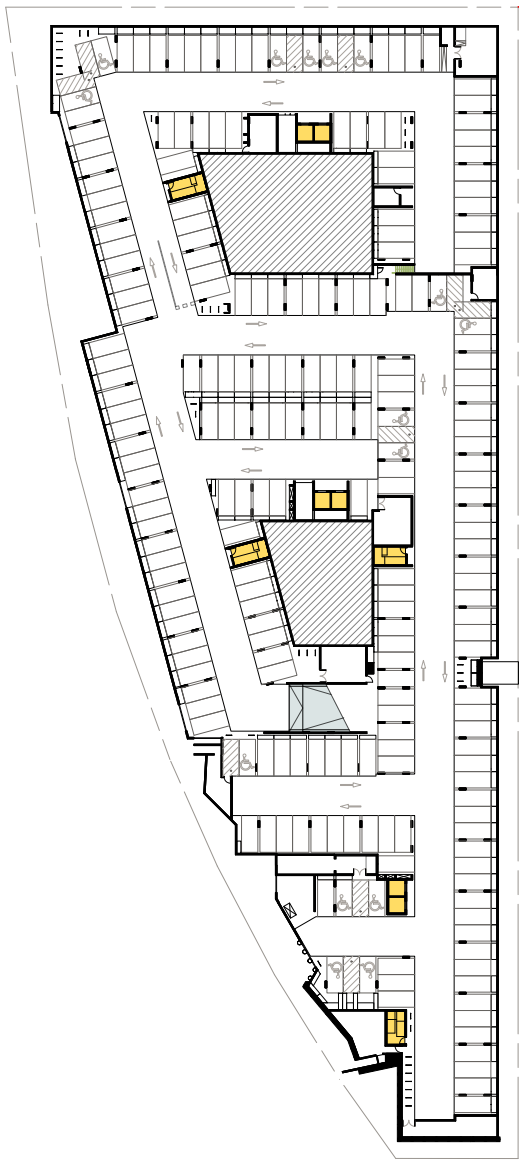
Separation between the 3 forms, created for the through-site link and the basement driveway access, provide distance between apartments for visual and acoustic privacy. The public through-site link is aligned to extend the street grid of the masterplan beyond, enhancing the permeability of the large blocks. Primary building entries from Cawood Avenue and Galaup Street are clearly identified by full-height recesses in the building perimeter, which also serve to reduce the length of the street wall. Almost all ground floor garden apartments have individual entries to their private open spaces.

A landscape solution

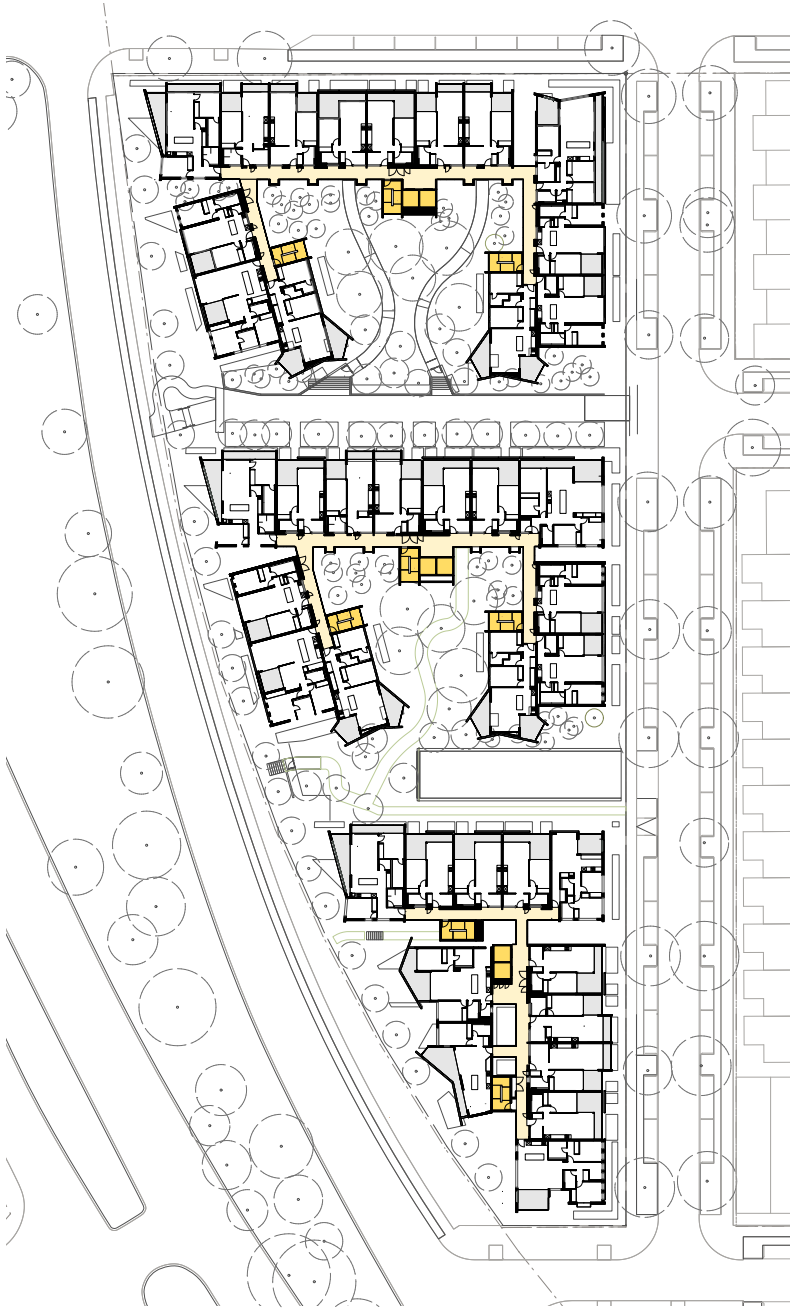
The scheme is notable for its commitment to incorporating green infrastructure, appropriate to the strongly natural setting of this peninsula. Deep soil provision is generous at 25% of the site area. The single-level shared basement has been arranged around 2 significant voids aligned with the courtyards above, allowing for deep soil, and therefore substantial canopy trees, at the heart of each of the complexes. In time, these will be delightful spaces to inhabit and overlook. Deep soil is also carefully coordinated along the boundary setbacks.



Site section



Basement plan



Level 2 plan (typical)

Twisting to the view

The 2 courtyard buildings are generally shallow with single-loaded corridors, except for a single ‘inward’ facing unit at each tip. Remarkably, these apartments, which would typically only look internally over the courtyard, also have views outside the complex with specially configured balconies that ‘reach’ to look out between the buildings, but maintain inter-apartment privacy with screening.



Outlook for everyone
‘Inward’ facing apartments have a protected outlook beyond the courtyards through clever planning and screening.

A private outlook
Screens ensure privacy and shape the outlook from this special balcony.

Robust materials

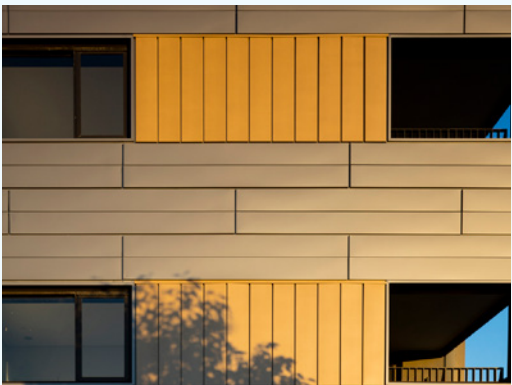
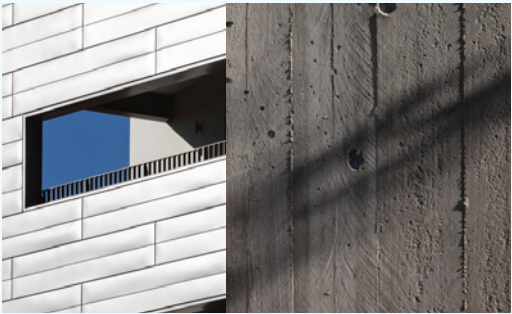
The building is grounded by a robust concrete base behind a softening layer of planting. Generous planters and built-in timber seating encourage chance interactions and enable socialising along the wide through-site link. Shared central courtyards have deep soil landscaped gardens designed with indigenous vegetation reflecting the landscape qualities of the Eastern Suburbs Banksia Scrub, of which remnant pockets remain nearby.

The coastal location demanded that the site was treated as an extreme environment for the purposes of construction. Materials were selected and detailed to withstand the harsh conditions, including off-form concrete and a variety of solid aluminium cladding applications with expressed joints. This rugged exterior surface is given depth and texture with patterning of the cladding panels and a layering of operable screening elements and metalwork balustrades, which all work to catch the light and shadow and create visual interest. Wherever possible, modular repetitive elements were used to ensure quality, procurement speed and cost control. The durable protective exterior is countered internally by soft, calm interiors and large window openings which open up the facade for outlook.

The materials palette is restrained, to complement rather than compete with the surrounding natural environment. The striking accent colours chosen for the internal facades of the gallery access corridors directly reference the tones of the geologically significant miocene deposits, found in the cliff face of a nearby park, that are still in use by the original custodians of the land.



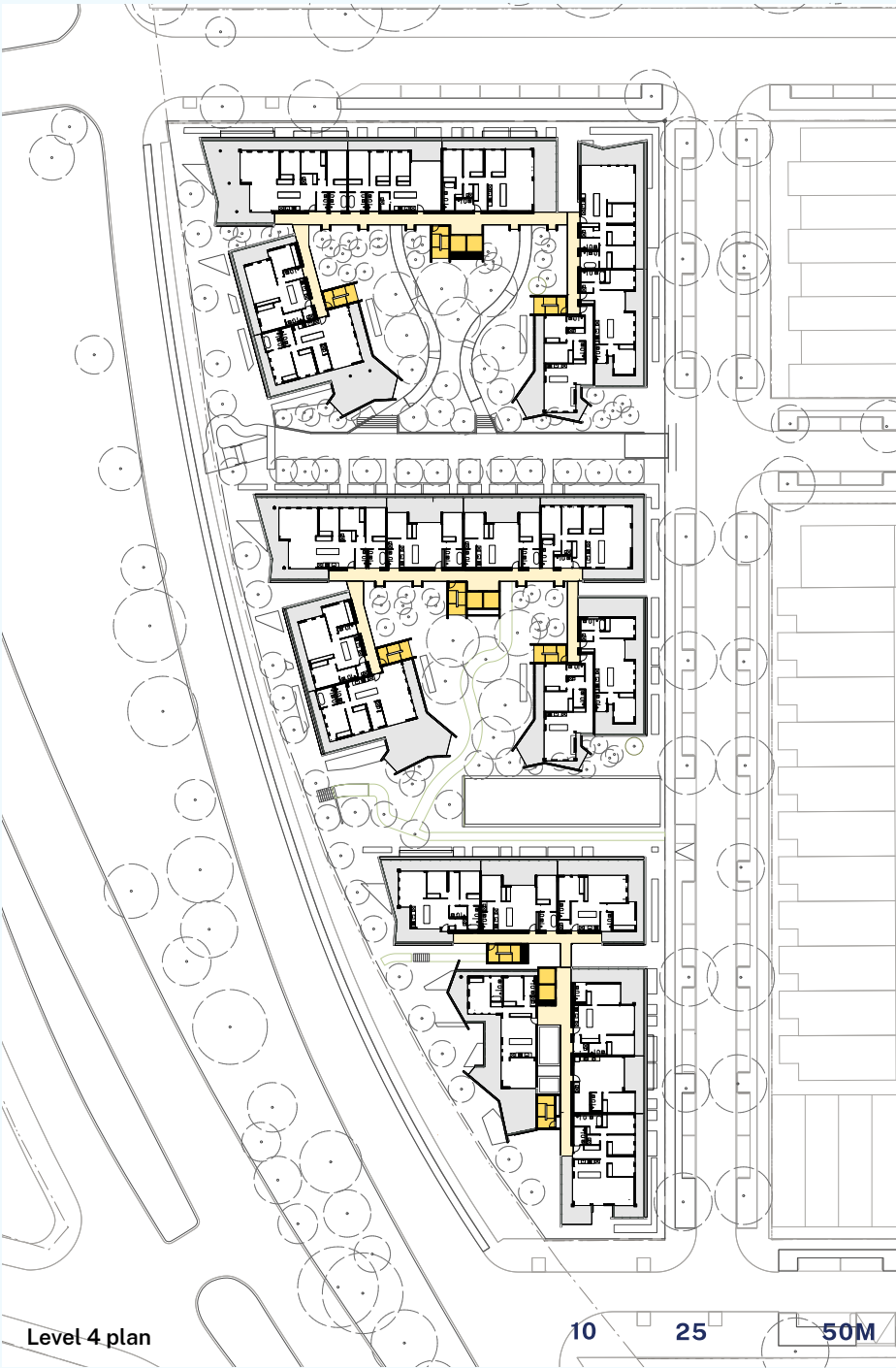
Public interface
Over time, planting adjoining the public through-site link will provide additional acoustic and visual privacy, as well as a leafy outlook.



Coastal exposure
Materials have been chosen to withstand the extreme environment. Modular elements and detailing have been used wherever possible, and pattern and texture relied upon for impact.



Image: MAKO Architecture.





Spectacular outlook

Ocean views are available to the east and the west of the site.

Winter sun

All of Illume's apartments receive some midwinter sun, which make these great apartments to live in.

Courtyard circulation

Common circulation is via open-air galleries. Although long, these 'access balconies' are pleasant and comfortable spaces offering a high level of amenity with abundant daylight and fresh air. Juliet balconies punctuate the courtyard galleries to overlook the landscaped gardens, forming small breakout spaces for social interaction, while breaks in the building exterior aligned with the ends of corridors offer views to beyond. Fire egress stairs are open to the courtyard to also benefit from natural light and air.

Many of the apartments have study spaces or kitchens next to the common accessways, with high-level windows that provide natural cross-ventilation without compromising privacy. It is difficult to achieve this outcome where bedrooms are located next to common circulation.

Open access

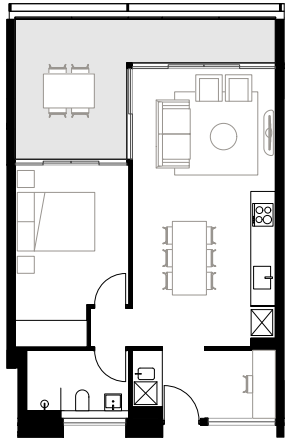
The courtyard buildings have open gallery access, with views over the courtyard and glimpses out to the ocean.



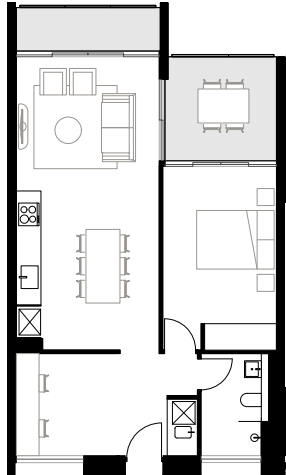
Sunny place by the sea

There are 179 apartments in total, with 40 different types of 1-, 2- and 3-bedroom apartments. Units are meticulously planned to achieve generous open-plan living spaces separated from bedrooms and bathrooms by short internal corridors. Balconies are used to give external shape and character to the building and to take best advantage of spectacular distant views, both east to Little Bay and the ocean horizon and west to Port Botany and the airport.

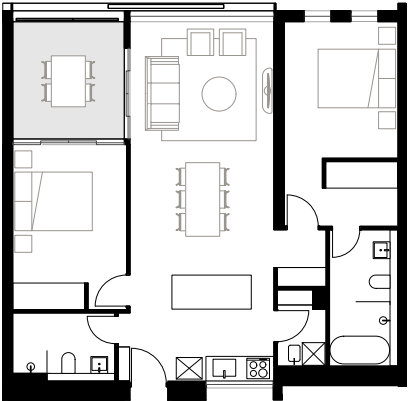
The meticulous planning ensures high levels of amenity for the apartments, with over 90% of apartments receiving over 2 hours of midwinter solar access to their living areas and private open space.



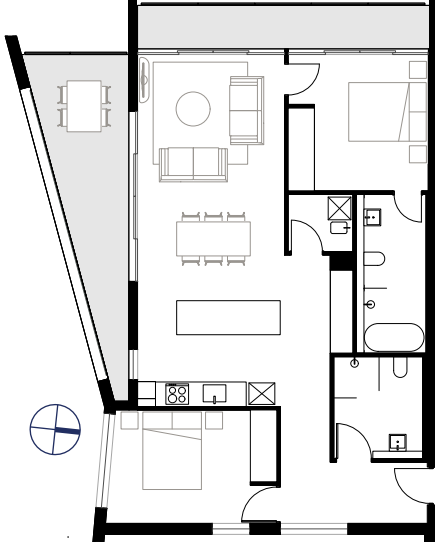
1 bedroom + study
55 m² + 15 m² private open space



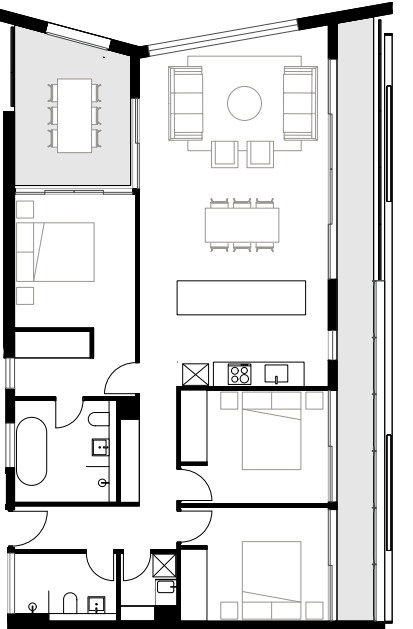
1 bedroom + study
63 m² + 13 m² private open space



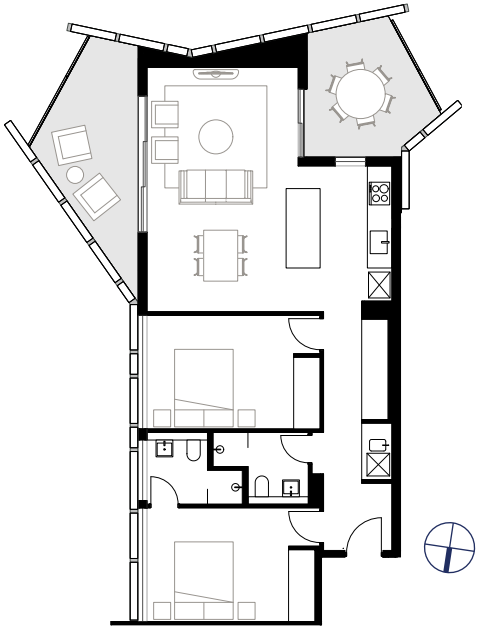
2 bedroom
85 m² + 9 m² private open space



2 bedroom (adaptable to AS4299)
96 m² + 24 m² private open space



3 bedroom
113 m² + 27 m² private open space



2 bedroom
84 m² + 22 m² private open space

Typical apartment plans

This scale bar applies to all plans. The north point provided for each plan is correct for the instance shown, but may be different where plans are repeated elsewhere in the development.

LINE OF SIGHT TO THE APARTMENT DESIGN GUIDE (ADG)



Image: MAKO Architecture.

ADG 3E DEEP SOIL ZONES
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

Provision of deep soil was clearly prioritised from the outset at Illume. The single-level shared basement is carefully planned around voids, aligned with the courtyards above, to ensure deep soil is available to support significant planting in the communal open space. When mature, the endemic species chosen will provide a verdant outlook for residents, as well as providing environmental benefits such as increased permeability for stormwater and contributing to urban tree canopy, reducing temperatures in summer and providing habitat for local fauna. Deep soil provision in the courtyards and on the street setbacks equals 25% of the site area, which is exceptional and far in excess of the planning requirements.



ADG 4A SOLAR AND DAYLIGHT
ACCESS OBJECTIVE 4A-1:
To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space

ADG 2015 recommends at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight to living rooms and private open space between 9 am and 3 pm in midwinter. Through masterful site planning, over 90% of the apartments meet this criteria. All apartments at Illume receive at least some direct sunlight at this time, well above the criteria in the ADG. This exceptional outcome improves thermal comfort and available daylight, reducing reliance on artificial heating and lighting.

ADG 4B NATURAL VENTILATION
OBJECTIVE 4B-3:
The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents

By virtue of the open gallery access, slim building sections and thoughtful planning of apartments, nearly 90% of dwellings are naturally cross-ventilated. Uses such as bathrooms, kitchens or studies with a lower need for acoustic privacy are located next to the gallery access, with high-level windows; the sill is 1.5 m above floor level for privacy and to avoid interference with fire egress.

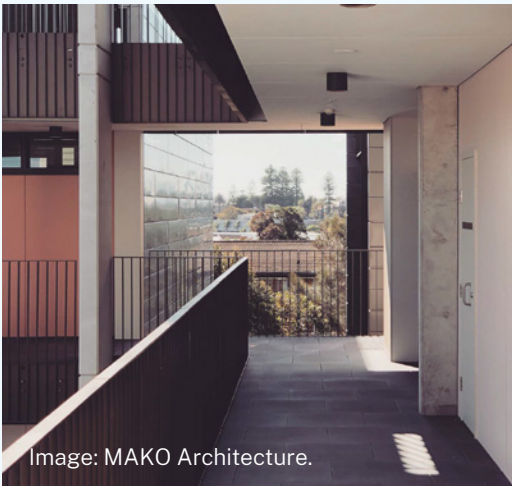


Image: MAKO Architecture.

ADG 4F COMMON CIRCULATION AND SPACES
OBJECTIVE 4F-1:
Common circulation spaces achieve good amenity and properly service the number of apartments

OBJECTIVE 4F-2:
Common circulation spaces promote safety and provide for social interaction between residents

Requirements for common circulation were framed differently under the RFDC, and Illume has between 12 and 14 units per core on each level. However, the open galleries are single loaded, careful planning ensures acoustic and visual privacy is protected, and the benefits of excellent natural cross-ventilation to apartments and ample light and air to common circulation is clearly a worthwhile offset. Galleries also feature breakout spaces for interaction, open stair access to encourage non-lift use, a quality landscaped entry sequence, and views beyond the building through open ends of corridors. All common circulation, including courtyards and the through-site link, is well-lit, safe and has a high level of passive surveillance.



Street interface
Ground floor apartments have individual street entries where possible. All images by Brett Boardman Photography, unless noted otherwise.