

CASE STUDY

Verve Apartments, Newcastle



Urban renewal done well
The small-footprint towers at Verve create excellent residential amenity and contribute to the urban renewal of this industrial edge of the Newcastle city centre. Image: Brett Boardman Photography.

Rich landscape investment
An extensive roof garden is provided for residents on top of the car park. This garden is framed as the prime communal focus for residents with vegetable gardens, seating and shade pergolas. Image: Murray McKean.

A distinguished, ambitious and progressive high-rise residential development that significantly contributes to public realm quality and achieves a high degree of residential amenity

QUICK FACTS

APARTMENT BUILDING TYPE:
Tower

LOCATION:
Newcastle, NSW
Regional/urban

COUNTRY:
Awabakal and Worimi

LOCAL GOVERNMENT AREA:
City of Newcastle

ZONING:
B3 Commercial Core

APPLICABLE CONTROL:
2015 Apartment Design Guide (ADG)

DESIGN EXCELLENCE:
NSW State Design Review Panel

CLIENT:
Miller Property Corporation

PROCUREMENT:
Design and construct with architectural services throughout

PROJECT DATA:
Site area 4,585 m²
Floor space ratio 5.0:1
209 apartments (16 x studio, 110 x 1B 40 x 2B, 43 x 3B)
5 retail/commercial units
5–20 storeys
257 car parking spaces
220 bicycle parking spaces

SITE DENSITY:
456 dwellings/ha

YEAR:
Completed 2019

PROJECT TEAM:

ARCHITECT
CKDS Architecture with Hill Thalys Architecture + Urban Projects

LANDSCAPE ARCHITECT
Jane Irwin Landscape Architecture

TOWN PLANNER & SURVEYOR
ADW Johnson

STRUCTURAL & CIVIL ENGINEER
Northrop Consulting Engineering Services

HYDRAULIC + FIRE ENGINEER
Wallace Plumbing & Fire Design

ELECTRICAL ENGINEER
S4B Studio

MECHANICAL ENGINEER
Edwards & Vickerman Consulting Engineers

BUILDER
BLOC

AWARDS:

2020 AIA National, Residential Architecture–Multiple Housing, Commendation

2020 AIA NSW, Residential Architecture–Multiple Housing, Aaron Bolot Award

2020 AIA NSW, Blacket Prize

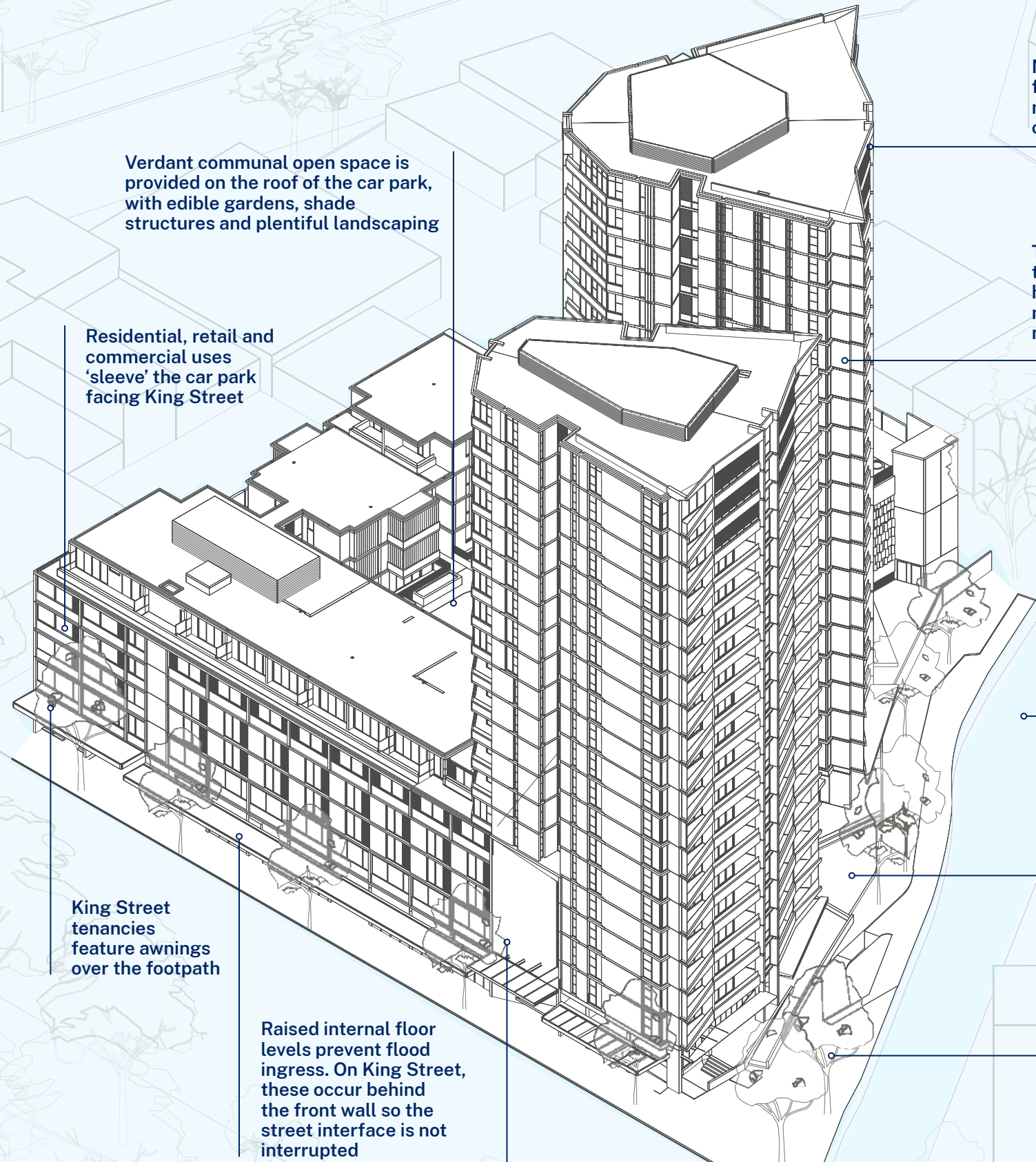
2020 AIA Newcastle, Newcastle Architecture Medal

2020 AIA Newcastle, Residential Architecture –Multiple Housing, Award

2020 AIA Newcastle, Sustainable Architecture, Commendation



Newcastle's tallest residential development to date, Verve is a pair of slender towers anchored by a mixed-use podium, creating a publicly accessible promenade beside an existing canal.



Verdant communal open space is provided on the roof of the car park, with edible gardens, shade structures and plentiful landscaping

Residential, retail and commercial uses 'sleeve' the car park facing King Street

King Street tenancies feature awnings over the footpath

Raised internal floor levels prevent flood ingress. On King Street, these occur behind the front wall so the street interface is not interrupted

A 3-storey high lobby is expressed on the facade as an entry portal with artwork referencing the geological character of the area

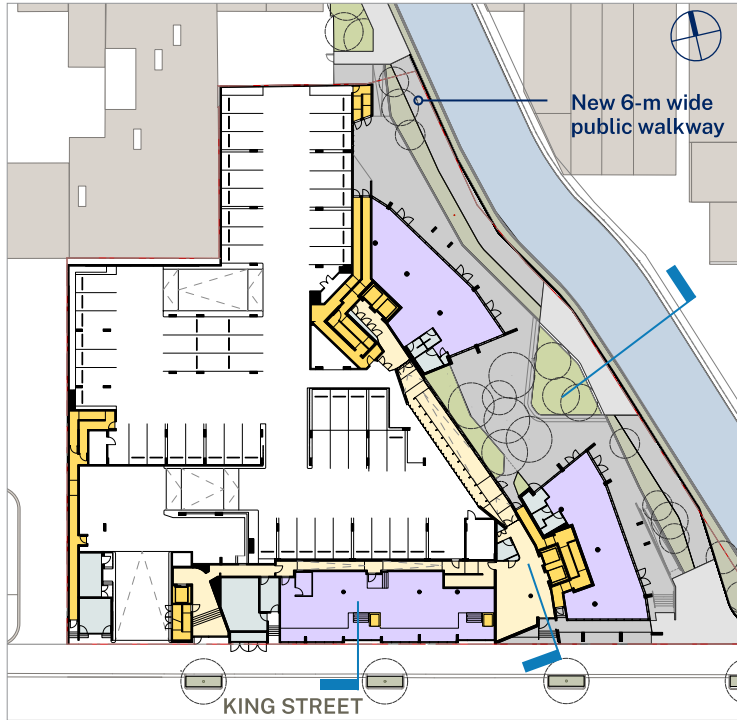
Minimal use of applied finishes in favour of robust materials like brick and concrete ensures longevity

The majority of apartments in the small-floorplate towers have panoramic views, excellent natural cross-ventilation and midwinter solar access

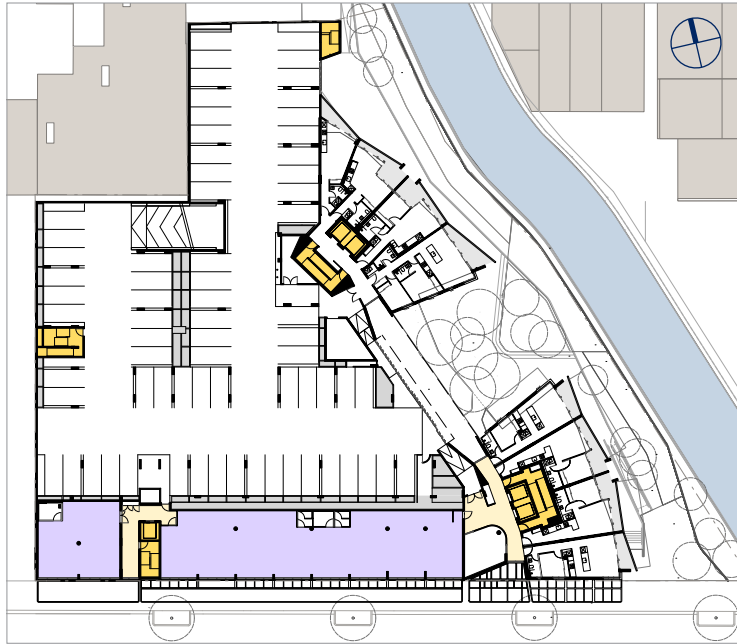
The existing channelisation of Cottage Creek exacerbates flood conditions affecting the site

A small public park between the towers connects the 2 retail tenancies at ground level

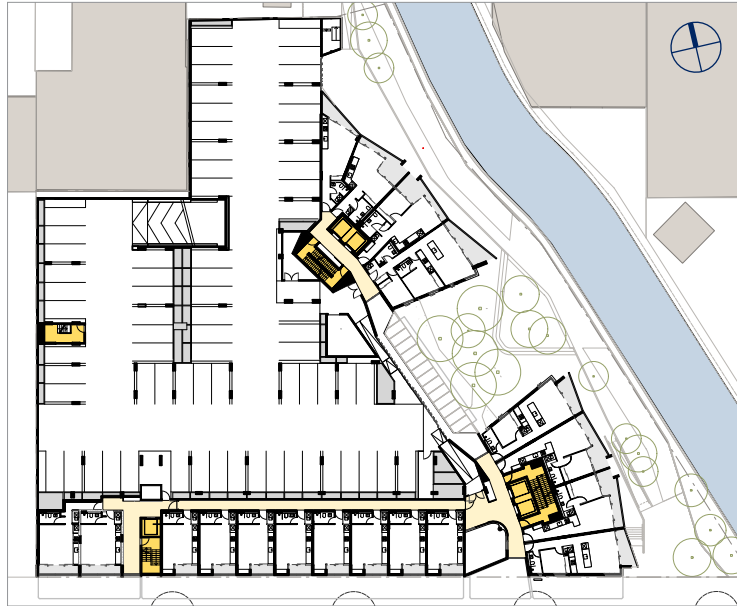
A 6-m wide publicly accessible footpath along the canal connects King Street with the waterfront and creates an extra public frontage for the site, enabling the 2-tower solution



Ground floor plan



Level 1 plan



Level 2 plan

The site was targeted in planning changes for higher-density residential developments in close proximity to Newcastle Interchange. This is urban regeneration at its finest – a comprehensive urban project incorporating new public space, mixed-use activation and diverse inner-city high-density living with excellent residential amenity.

The project is located on a deep consolidated mid-block site, adjacent to the Cottage Creek open stormwater channel. The site has several features that have prompted the particular built-form response. Due to mine subsidence, prevalent in Newcastle, maximum excavation is limited to 1 m below finished ground level. The site is also subject to flooding, and has a high groundwater level. The channel floods severely if blocked.

Responding to these site constraints, the architects have integrated the majority of car parking at grade and above ground rather than in basement levels, and to protect from flood ingress, raised all ground-level entry points. This is somewhat disguised on the King Street frontage where the floorplate steps up internally within the tenancies, but generally building entrances are elevated with well-integrated ramps and stairs. The driveway rises before it descends, and the lowest level of car parking is open so it can serve as flood storage during an extreme event.

Car parking on the lowest 3 levels is ‘sleeved’ with other uses to avoid sterilising the public faces of the building and to promote activation. The project has its primary frontage to King Street, a wide boulevard which is addressed with a 5-storey street wall that establishes a bold new scale for the precinct. Retail and commercial uses line the ground floor street edge sheltered by a continuous awning over the footpath. Services are discretely integrated between shopfronts. An additional level of south-facing commercial space at the first floor provides further vertical separation from the street to residential upper levels. The podium roof is a large, landscaped communal open space for residents, containing seating, shade, vegetable



gardens and other shared facilities. A concrete boundary wall anticipates the scale and form of future development on neighbouring sites.

Rising above the podium are a pair of distinctive towers. Rather than concentrate the floor space into a single tower, this paradigm-shifting project splits the potential floorplate into 2, so each tower has a floorplate area of less than 600 m² and presents as tall and slender within the cityscape.

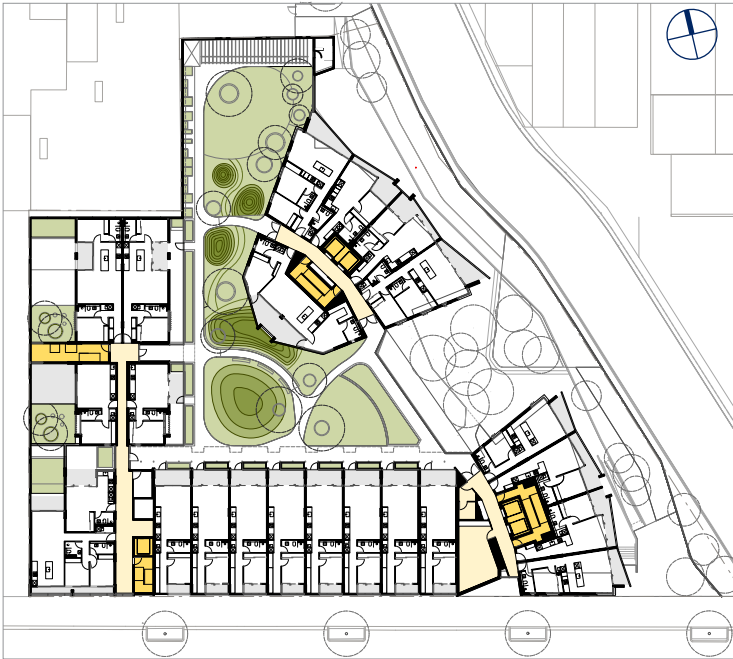
Public accessibility

Introducing a wide and welcoming pedestrian through-site link beside the channel is a key design strategy. The new link connects 2 parallel streets, bisecting a long street block and making a walking and cycling path between the Honeysuckle harbour front and Hunter Wetlands National Park. The extended public realm frontage is integrated with the development’s new ground floor retail offering.

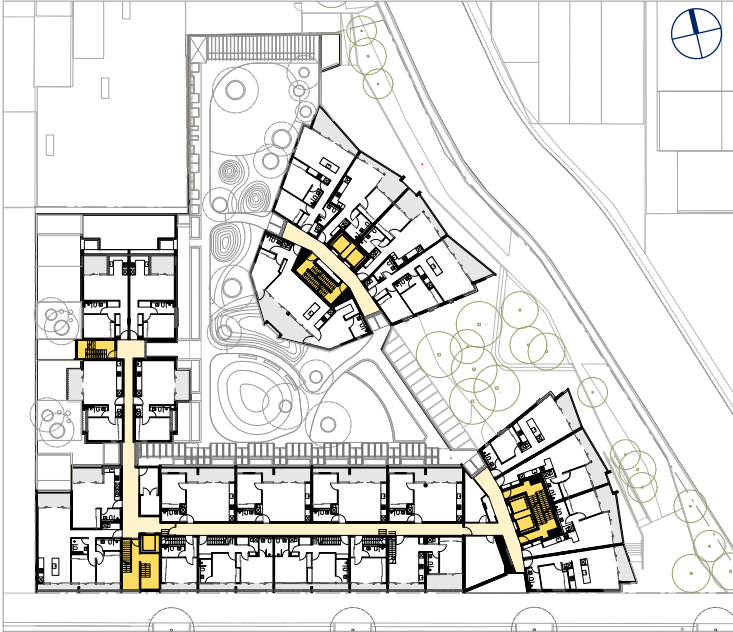
Including the dedicated through-site link was beneficial both to the development and to the public. The increased building frontage, effectively a new local street along the canal, allowed the towers to turn towards the harbour, sun and views. The strategy also augmented the public realm with an attractive and useful connection through the block which improves the permeability of the block structure and movement through the city more generally.

Publicly accessible
Part of the site along the canal is dedicated to public access.
Image: Murray McKean.

Through-site link in context
Diagram explaining the logic behind inclusion of the public through-site link and how it works in context to create a network. Image: CKDS Architecture, Hill Thalys Architecture + Urban Projects.



Level 3 plan

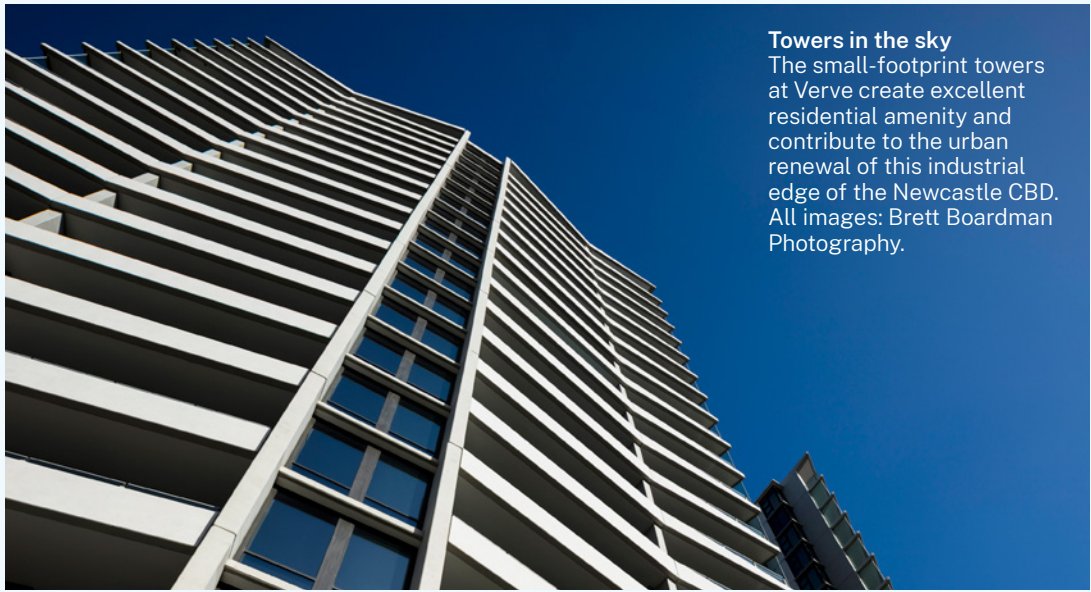


Level 4 plan

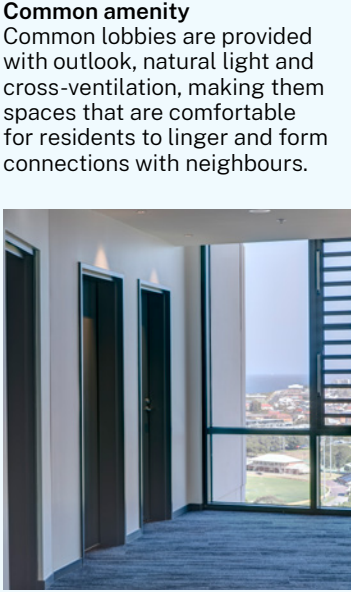


Level 18 plan

10 25 50M



Towers in the sky
The small-footprint towers at Verve create excellent residential amenity and contribute to the urban renewal of this industrial edge of the Newcastle CBD. All images: Brett Boardman Photography.

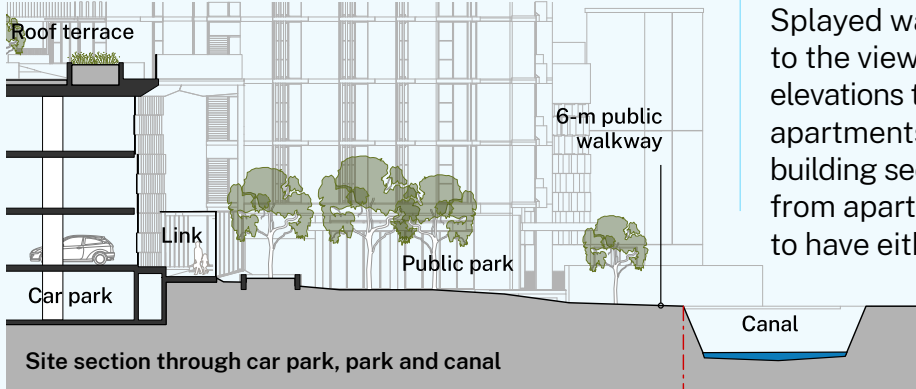


Common amenity
Common lobbies are provided with outlook, natural light and cross-ventilation, making them spaces that are comfortable for residents to linger and form connections with neighbours.

The building has a direct, tectonic quality which clearly expresses its making. Nothing is clad or hidden. Materials are enduring to reduce ongoing maintenance. The podium is concrete-framed with face brickwork and powder-coated aluminium-framed glazing infill. Detailing such as selective protrusion of slab edges and the slight chamfering of window reveals creates interest through composition, proportion and shadow. The tower forms are given particular attention as they are viewed from afar. A ‘chiseled’ plan geometry inflects the elevations so wall planes catch different angles of light. Balcony edges taper towards the building edge to create a fineness at the corners. The return walls of corner balconies which protect from high winds are made of glass to visually recede. The angled balconies create a dynamic profile as they meet the sky.

Park between the towers

Within the lot boundaries, a small public park is located centrally against the backdrop of the gold, folded, perforated-metal screen providing natural ventilation to the car park embedded in the podium behind. The park ground levels gradually step down to the 6-m wide dedicated pathway along the canal, as shown in the section above.

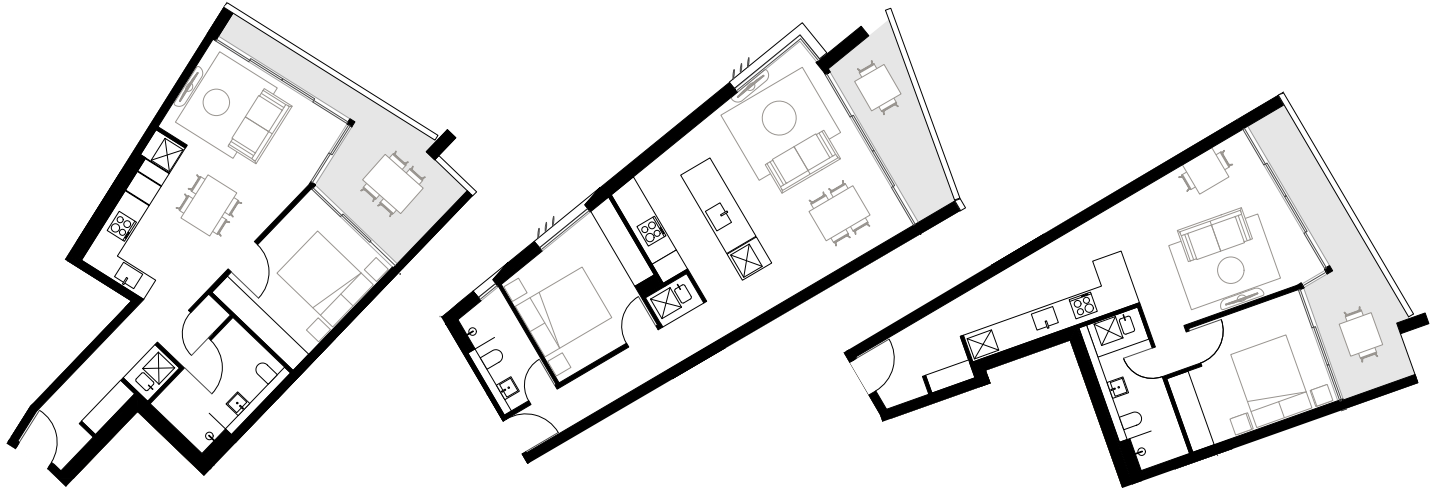


Tower apartments

Both towers are less than 600 m² in gross floor area which provides excellent residential amenity. The core is compact and short corridors are open to light and air at both ends.

With a maximum of 6 apartments per floor, and often as few as 3, the fan shape of the towers allows most of the units to face north-east towards the sun, views and sea breeze. The relatively few apartments which face south-west benefit from a shallow and wide layout with 3 aspects. Floor-to-ceiling glass allows generous views, with stacked awning windows admitting air without relying on open sliding doors.

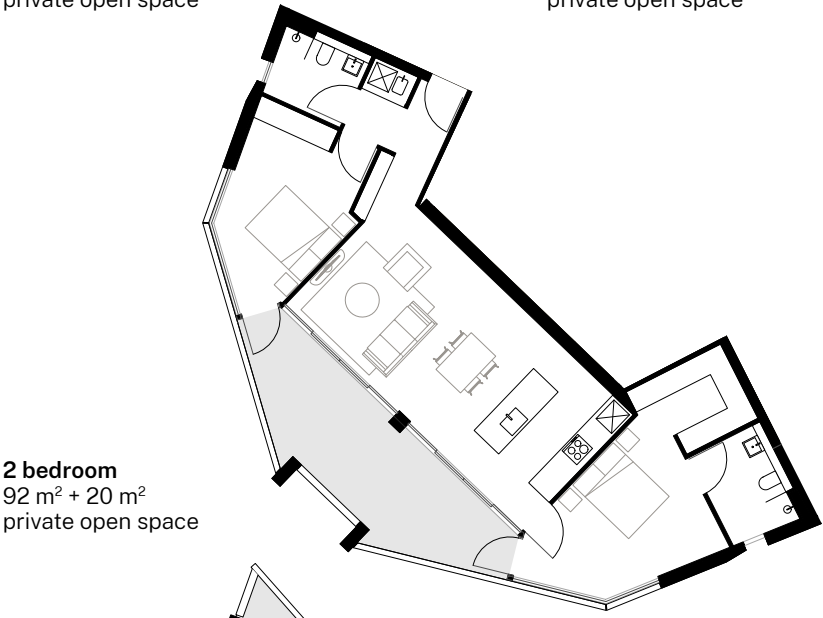
Splayed walls in the tower open living rooms out to the views, with vertical louvre screens to side elevations to guide views past the other tower. Many apartments enjoy dual aspects, due to the thin building sections and small tower footprints. Outlook from apartments is key, with every unit designed to have either a green or panoramic ocean outlook.



1 bedroom
54 m² + 11 m²
private open space

1 bedroom
56 m² + 8 m²
private open space

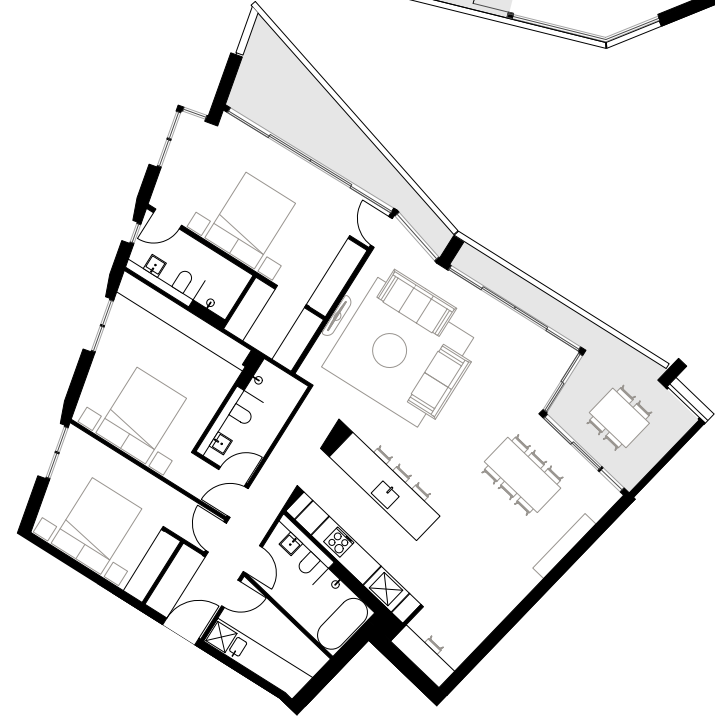
1 bedroom
53 m² + 12 m²
private open space



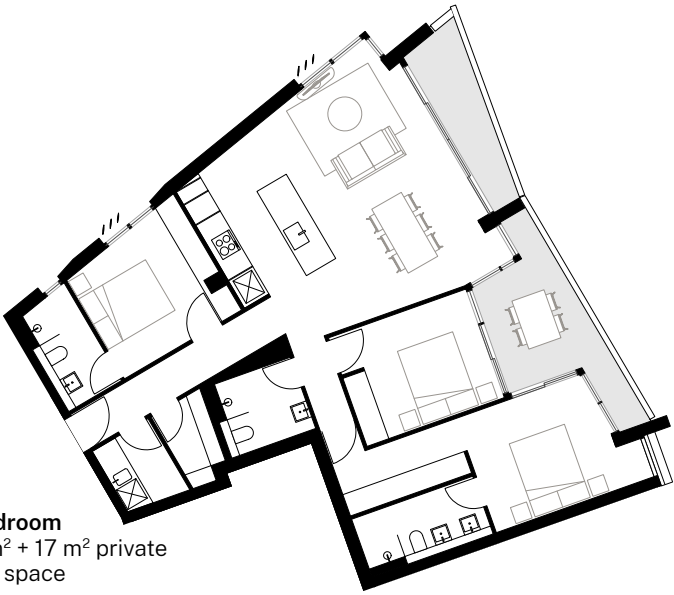
2 bedroom
92 m² + 20 m²
private open space



2 bedroom
83 m² + 13 m²
private open space



3 bedroom + media
144 m² + 21 m² private
open space



3 bedroom
116 m² + 17 m² private
open space

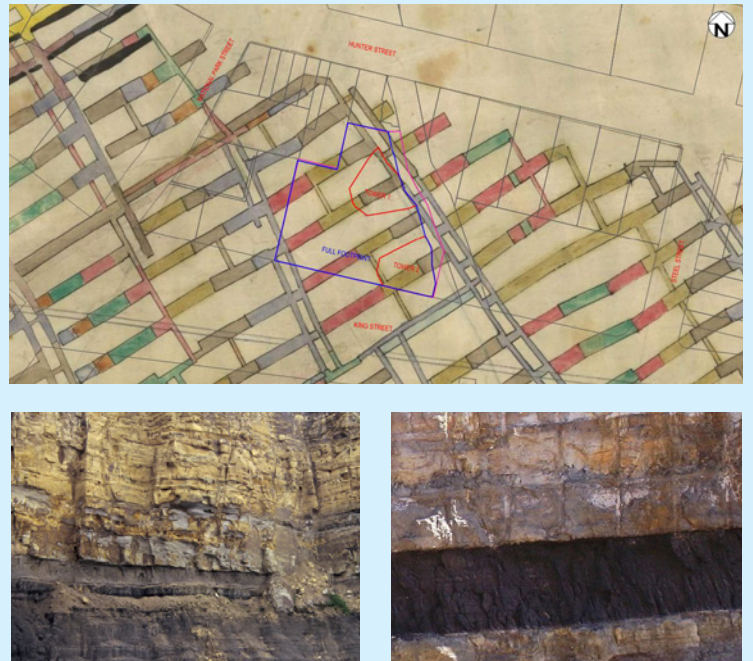
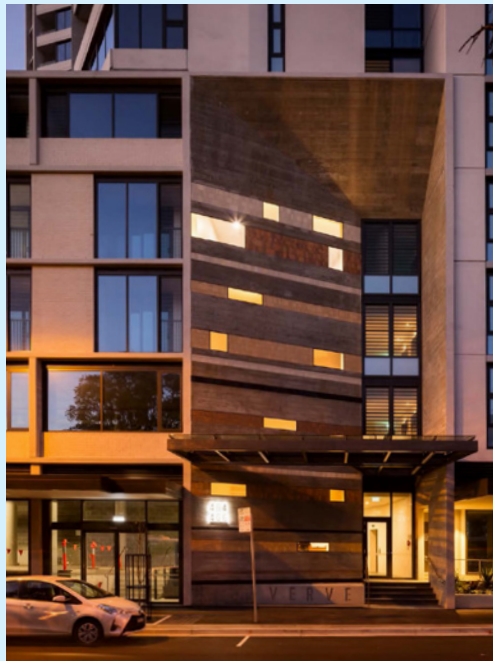
Typical tower apartment plans
This scale bar and north point apply to all plans.





Green roof
The courtyard is heavily landscaped to form a verdant outlook for residents, and includes shared facilities like edible gardens. Image: Murray McKean.

Place-based artwork
The lobby is 3 storeys high, relating to the scale of the towers. The lobby street face features artwork referencing local geological character and disused mining shafts. Images: Brett Boardman Photography.

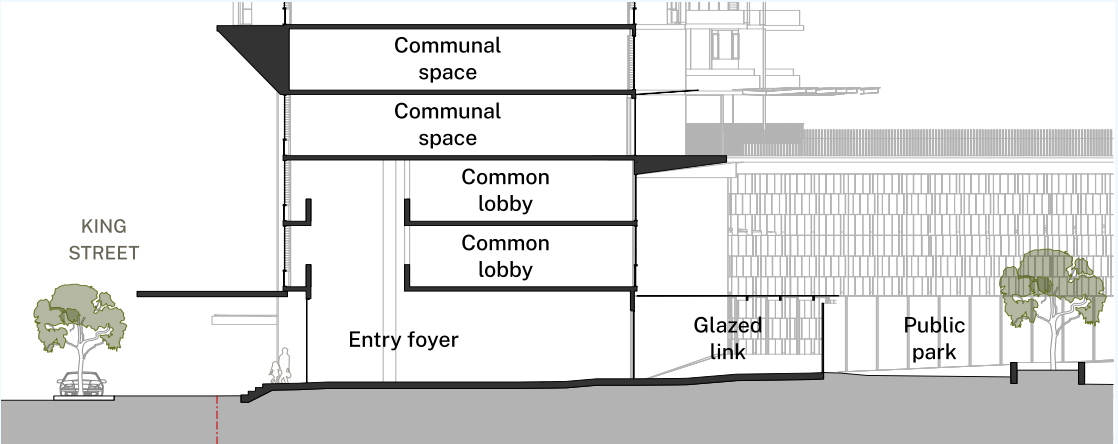


A wide variety of apartment layouts and sizes is offered, with each designed to best exploit the specific location within the building. Two-storey cross-through units in the southern building situate living rooms to the north, providing solar access and shelter from the busy road frontage to the south. Single-storey units in the western building are shallow with ample frontage facing east or west, again to capture sun.

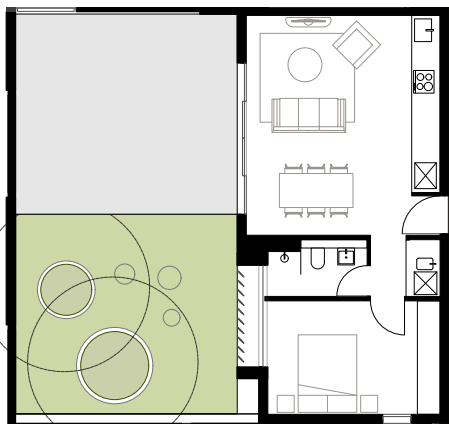
A grand entry

The main entry to the building is grand, in keeping with the scale of the building. A higher awning in glass and clear integrated signage highlight the entrance. The entrance is treated as piece of public art, with horizontal board-form concrete patterning and hand-crafted ceramic tile inlay referencing geological strata and interpreting a local history of mining. Inside, a dramatic 3-storey high foyer with a composition of punched window openings provides a point of respite from the street and an orientation point to access other parts of the building.

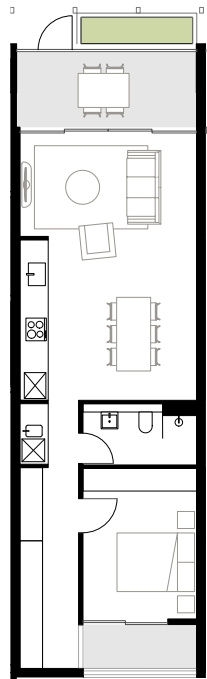
Lifted ground plane
The entry is raised for flood proofing, with a ramped connection from the street also serving the retail space next to the lobby, and providing equitable access to the public parklet. The lobby flows through to the public park and on to the second tower lobby. Drawings: CKDS Architecture, Hill Thalys Architecture + Urban Projects.



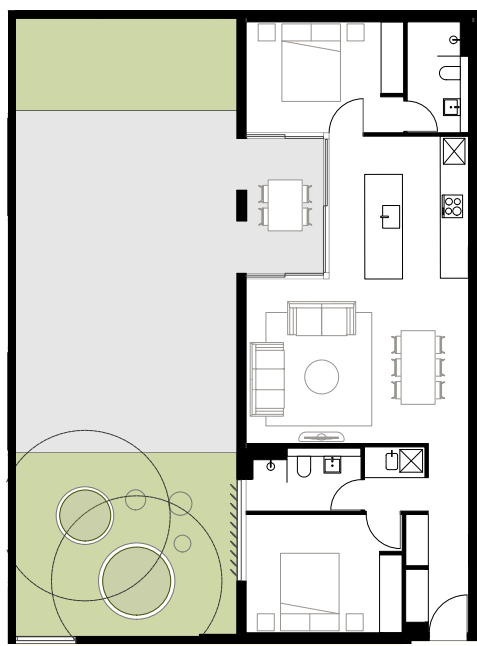
Site section through entry foyer and park



1 bedroom
50 m² + 63 m² private open space



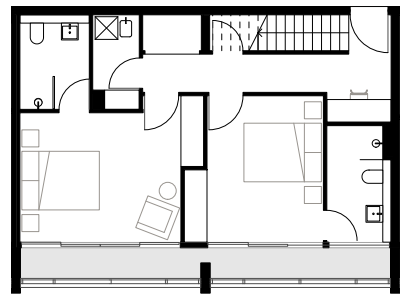
1 bedroom
64 m² + 13 m² private open space



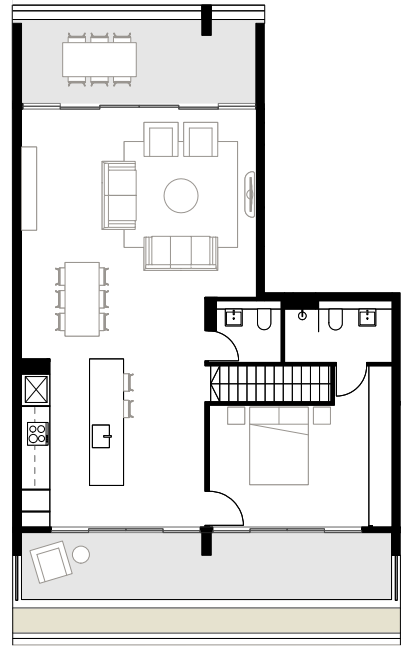
2 bedroom
86 m² + 103 m² private open space



2 bedroom
92 m² + 48 m² private open space



3 bedroom (2 storey)
148 m² + 42 m² private open space



Typical podium apartment plans
This scale bar and north point apply to all plans.



LINE OF SIGHT TO THE APARTMENT DESIGN GUIDE (ADG)



ADG PART 2 DEVELOPING THE CONTROLS

Verve is distinguished by a pair of slender, 20-storey fan-shaped towers, angled to address the creek frontage. Their broad face to the north-east has multiple advantages: access to sun and sea breeze, views and privacy. These slender towers have much smaller footprints than is the norm, with a gross floor area of 582 m² and 536 m². Small-footprint towers confer many advantages. The public realm benefits when increased density is delivered through slender tall buildings with space between them that contributes to an attractive skyline and avoids heavy bulk or shadow. Apartments are also improved, with fewer units sharing each floor and more perimeter wall allowing increased natural cross-ventilation, solar access and outlook. In the case of Verve, over 70% of apartments achieve natural cross-ventilation, and nearly 90% of apartments receive over 2 hours of midwinter sun to living areas and private open space.

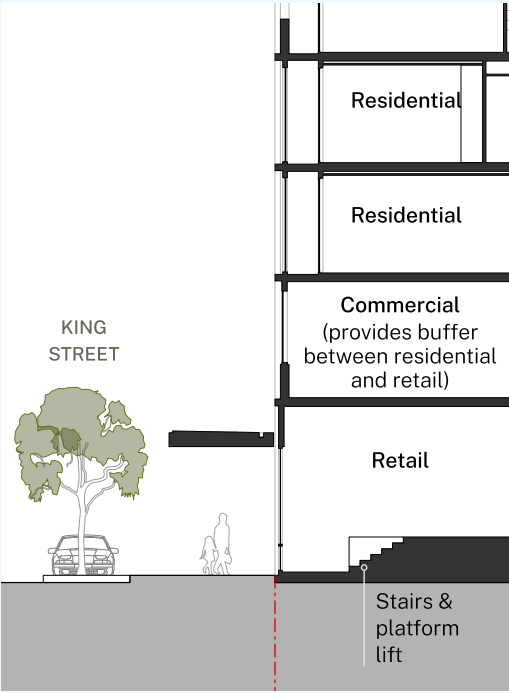
These advantages outweighed the potential impacts of reduced building separation between the towers, which was further mitigated by careful positioning of openings and screening elements in the facade.

ADG 4V WATER MANAGEMENT AND CONSERVATION OBJECTIVE 4V-3: Flood management systems are integrated into site design

The ‘natural’ ground level of the site is subject to flooding, and this is further exacerbated by overcharging of the stormwater channel forming the eastern edge of the site.

The potential water ingress is addressed by raising all ground level entry points in the development. The driveway rises before it descends, and the lowest level of car parking is open so it can serve as flood storage during an extreme event.

Elevated entry levels pose a challenge to equitable access, and can result in poor relationships to the street at ground level. However, accessibility has been skillfully managed at Verve with well-integrated walkways and ramps, as well as steps. On the King Street retail/commercial frontage (shown below) the floorplate steps up internally within the tenancies, with chair platform lifts beside, meaning the relationship at the footpath is preserved. On the retail frontages next to the canal, clever manipulation of ground levels both protects the interiors and ensures accessibility.



King Street interface (section)
Drawing: CKDS Architecture, Hill Thalys Architecture + Urban Projects.

ADG PART 5 DESIGN REVIEW PANELS SEPP 65 allows for design review panels to be established as an important tool to improve and enhance the design quality of apartment developments.

The design achieved design excellence under the local environmental plan and was developed in extensive consultation with a design excellence panel that reviewed and advised on the scheme throughout the process, including during the construction phase.

The design process was a close and genuine collaboration between 2 architectural practices. The concept design evolved through numerous meetings and ‘taking turns’ at the design to test, critique and improve the agreed approach through multiple iterations. Early schemes explored many versions of a single tower; none were deemed satisfactory. The initiative to include the pedestrian through-site link along the canal ‘unlocked’ the site with an additional frontage, enabling the development of the 2-tower scheme.

ADG 3D COMMUNAL AND PUBLIC OPEN SPACE OBJECTIVE 3D-1: A generous area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping

The project achieves an impressive amount of deep soil, primarily along the canal frontage, and this is further complemented by planting on structure on top of the car park, to form the residents’ communal open space. This space has excellent solar access and is heavily planted, including with edible gardens, with irrigation provided through rainwater re-use.

OBJECTIVE 3D-4: Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood

Along the site’s north-east boundary to Cottage Creek, a new 6-m wide public landscaped pathway bisects this large urban block on the diagonal to improve pedestrian and cycle connections to the harbourfront. A small public park is included along this pathway between the 2 towers, connecting the 2 retail tenancies fronting the canal.



Public park
A small public park is included within the lot boundaries, between the canal and an art screen to the car park. Image: Murray McKean.

This case study is not intended to suggest that the development described or similar will be approved in part or whole in another case. Key information regarding the intent of these case studies can be found on the Department’s website. This case study illustrates positive design outcomes in response to unique site opportunities and constraints. It is important to note this case study does not comment on construction outcomes.