

CASE STUDY

The Burcham, Rosebery



Wrigley's daylight factory
The Burcham is notable for the adaptive re-use of the Wrigley's Chewing Gum Factory, described as 'well-ventilated and well-lighted'. All photos: Tom Ferguson Photography.

A clever adaptive re-use redevelopment in an urban renewal area, creating a courtyard apartment building around generous communal open space

QUICK FACTS

APARTMENT BUILDING TYPE:
Courtyard apartments

LOCATION:
Rosebery, NSW, Urban

COUNTRY:
Gadigal

LOCAL GOVERNMENT AREA:
City of Sydney

ZONING:
B4 Mixed Use

APPLICABLE CONTROL:
2002 Residential Flat Design Code (RFDC)

DESIGN EXCELLENCE:
Design competition

CLIENT:
The Stable Group

PROCUREMENT:
Design and construct, architectural services throughout

PROJECT DATA:
Site area 5,568 m²
Floor space ratio 1.65:1
99 apartments
(39 x 1B, 50 x 2B, 10 x 3B)
1 retail unit
4 and 5 storeys
94 car parking spaces
114 bicycle parking spaces (99 for residents)

SITE DENSITY:
178 dwellings/ha

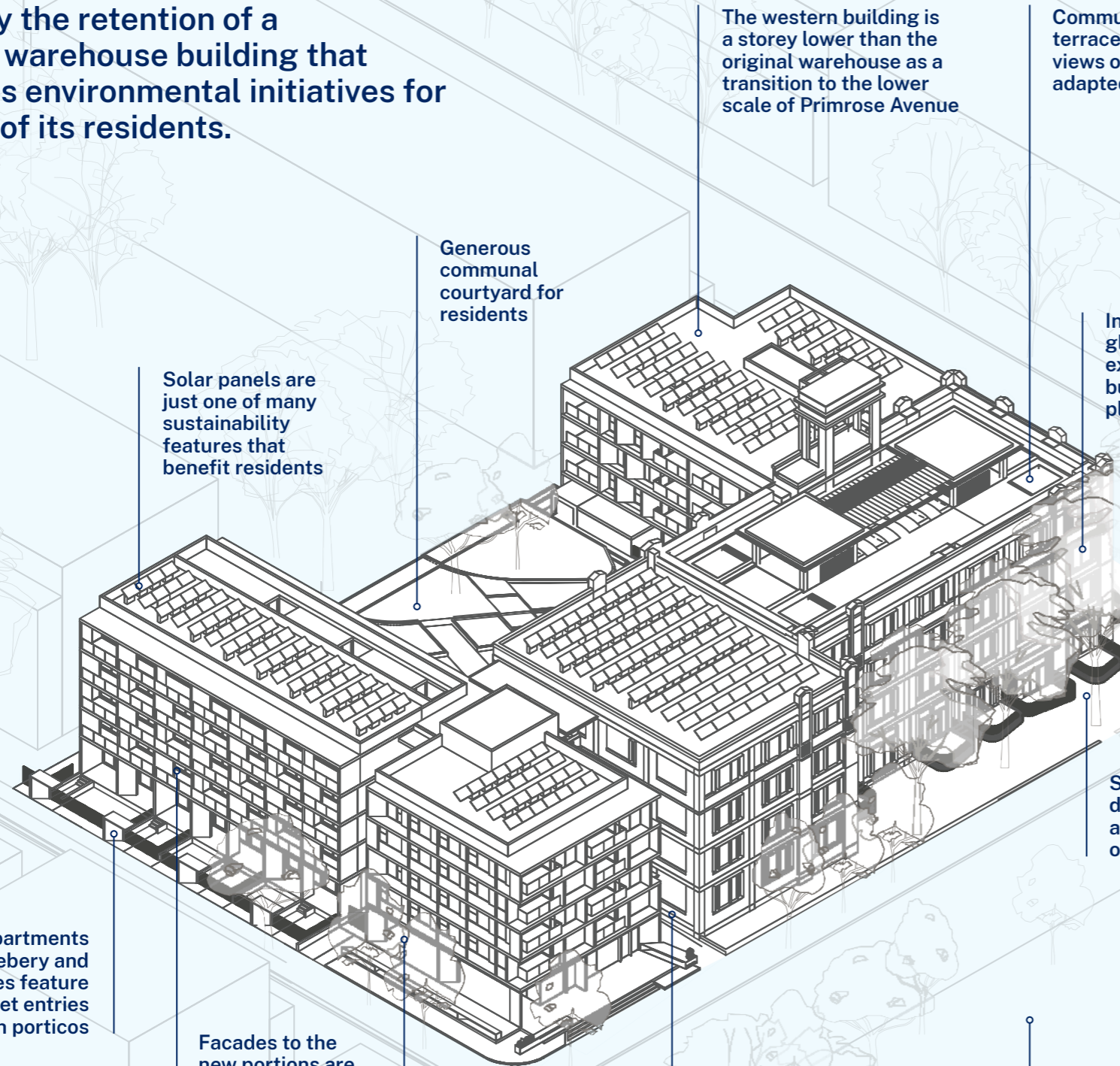
YEAR:
Completed 2018

PROJECT TEAM:
ARCHITECT
Allen Jack + Cottier (AJ+C)
LANDSCAPE ARCHITECT
Jamie Durie
TOWN PLANNER
Urbis
HERITAGE
Heritage 21
BUILDING CODE ADVICE
AED Consulting
STRUCTURAL ENGINEER
M+G Consulting
HYDRAULIC ENGINEER
C&M Consulting Engineers
ELECTRICAL ENGINEER
Evolved Engineering
FIRE ENGINEER
Olsson Fire & Risk
SUSTAINABILITY
Arup
BUILDER
Hamilton Marino Builders

AWARDS:
2020 AIA NSW, Residential Architecture – Multiple Housing, Commendation
2019 AIA NSW, Heritage – Creative Adaptation, Commendation
2019 UDIA NSW, Excellence in Medium-Density Development – Above 75 Dwellings, Winner
2019 UDIA NSW, Excellence in Sustainability & Environmental Technology, Finalist
2018 Sustainability Awards, Interior Architecture, Winner



The Burcham is a highly characterful adaptive re-use residential project anchored by the retention of a substantial warehouse building that incorporates environmental initiatives for the benefit of its residents.



The western building is a storey lower than the original warehouse as a transition to the lower scale of Primrose Avenue

Communal roof terrace with city views on top of the adapted warehouse

Generous communal courtyard for residents

Solar panels are just one of many sustainability features that benefit residents

Inventive prefabricated glazing modules keep the existing facade rhythm, but allow for variations in planning behind the facade

Significant mature trees in deep soil have been retained and provide excellent outlook for the apartments

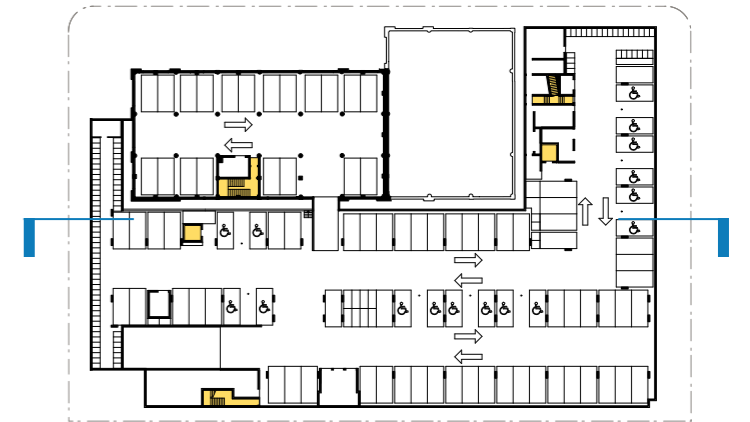
Ground floor apartments on Rosebery and Primrose avenues feature direct street entries with porticos

Facades to the new portions are rhythmic, deep and weighty, and clearly contemporary

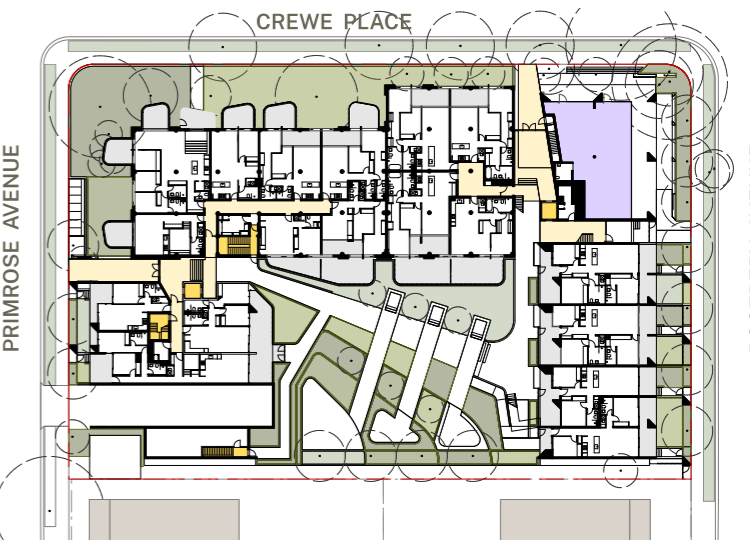
A significant urban park opposite provides breathing space in this dense urban environment

Clear breaks between the new buildings and the adapted warehouse with glazed roof elements are used for entry lobbies and circulation

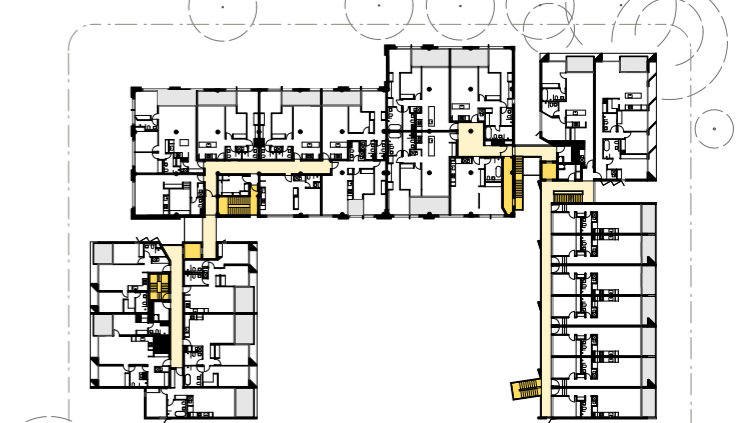
A retail space on the ground floor corner creates presence and activates the street in this mixed-use area



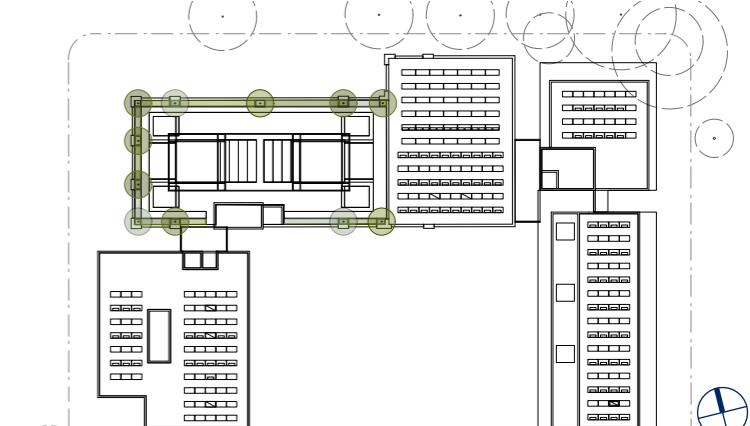
Basement level 1 plan



Ground floor plan



Level 2 plan (typical)



Roof plan

10 25 50M

The Burcham demonstrates the broader cultural value of maintaining historical built fabric to enrich our urban landscape.

The site was occupied by an assemblage of industrial buildings of varying quality. The precinct-specific master plan by the local council was focused on the urban renewal of the wider Green Square – North Rosebery area, and anticipated the existing structures would be demolished for new residential development. As the site was over 5,000 m², City of Sydney required a design competition. The winning submission was the only entry that preserved the original 4-storey warehouse building on the north-west corner of the site, incorporating its footprint into the intended courtyard apartment building form, and creating a significant internal courtyard.

The existing warehouse building is 4 storeys in height and has tall ceilings (4.2 m floor-to-floor) to serve the original manufacturing use. The new eastern building on Rosebery Avenue is a similar overall height as the warehouse, but manages to include an additional storey by using standard 3.1 m floor-to-floor height. The new western wing is a storey lower, helping the transition to the lower-scaled streetscape of Primrose Avenue.

To maintain the structural and heritage integrity of the warehouse, vertical circulation is located within the volumes of the new buildings and connected back to the existing warehouse floors

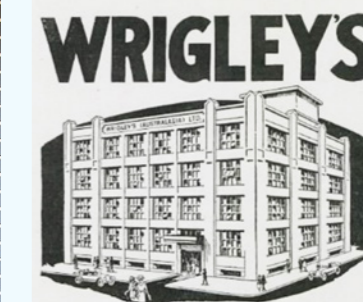
with short bridges. The lifts are double-sided to negotiate different floor levels between old and new buildings. An existing fire stair within the warehouse building is retained in situ.

Building entries are in the interstitial zones between the warehouse and the adjoining new buildings. The alignment of these entries allows for views straight through to the communal courtyard. Their openness provides abundant light and air to these spaces. New common circulation elements are ‘pulled away’ from the warehouse to reveal the external walls and allow the irregularity and scarring of the existing masonry to add character to these spaces. Heritage is celebrated through charming details such as ornate replicas of original light fittings flanking the entry gates and the naming of the building after the original architect (John Burcham Clamp).

A persuasive factor in deciding the winning scheme was its proposal to retain the former Wrigley’s Factory, one of the earliest buildings in the area, even though it was not a listed heritage item. The retention of the building embraces the unique history of the site and adds layers of richness to the development, particularly in the context of wholesale redevelopment of most of the adjacent blocks. The developer was able to achieve substantial cost savings, in addition to the environmental benefits and increased marketability, through the offer of unique character and features.



The new factory in 1918



We are proud of our new daylight factory at Rosebery, Sydney, in which all of Wrigley's for Australia and New Zealand is now made.

It is well ventilated and well lighted. All the process of manufacture are carried on under conditions of absolute cleanliness. The entire five floors, containing approximately 40,000 square feet of floor space, are used exclusively for the manufacture of Wrigley's Chewing Gum.

The product is made clean and it is kept clean and brought to you in same condition in our sanitary wax-wrapped package.

Sealed tight—kept right.

This delightful chewing confection is not only good—but it is good for you. Chew it after every meal—see how much better you will feel.

It benefits the teeth, throat, breath, appetite and digestion.

Soothing to jangled nerves and thirst quenching.

On sale wherever confections are sold
Or send 3 penny stamps for a trial packet, of either flavour, to

Patina of previous uses

The space between the new fabric and the old is carefully detailed – new circulation sits away from existing walls, and the ‘join’ is highlighted with natural light.





Main entry



Rooftop communal open space



Rooftop cinema

A green frontage

The retention of the warehouse meant the minimum landscaped setback to all frontages was significantly extended on the northern and eastern street edges, conserving existing mature trees. Ground floor units in the warehouse have suspended timber decks, minimising impact of private open space on tree roots. Ground floor apartments within the new buildings are set back behind planting and fencing for privacy, with each having an entry directly from the street opening into private open space. The north-east corner of the building is wrapped by a retail tenancy that activates the street and opens up to the park to the north.

A green centre

Over 40 m wide, the generous communal courtyard provides ample building separation for visual and acoustic privacy between apartments as well as a pleasant outlook. Low planter boxes define smaller-scale 'pockets' of space within the courtyard so it can be used by multiple groups concurrently. The variety of uses available for residents is further extended by a large roof terrace on the warehouse roof, with covered outdoor kitchen facilities and seating providing entertaining areas with city views. A former water tower is repurposed as an outdoor cinema screen, with timber sunlounges for the residents.

Green credentials

The project sets a comprehensive sustainability agenda to reduce non-renewable energy consumption and create greener ways of living, well in excess of any requirements of BASIX. The rooftop is exploited for an impressive array of photovoltaic panels connected to an embedded network that supplies bulk energy to the building through a single 'gate' meter. Each apartment is equipped with a smart meter, enabling residents to buy energy at a reduced cost from the body corporate, while also tracking usage. The photovoltaics also provide power for the base building, lowering strata levies. Apartments have ceiling fans in all bedrooms and living rooms. Hot water is provided by a centralised gas-boosted hot water system. Every apartment has a bicycle storage space and end-of-trip facilities are provided to encourage cycling. A car share space and 4 electric car charging bays are included in the basement car park. Upfront costs for these sustainability inclusions are amortised over the long term, with benefits ultimately flowing to residents.

Material expression

The expression of the warehouse is reserved, with a recessive dark paint colour to external walls and fine steel details in black. By contrast, the language of the new buildings is bright and bold. Above a robust dark brick base, projecting white concrete slab edges strike horizontal lines to define each floor level, while deep splayed off-form concrete reveals to balconies and corridors create an arresting geometric pattern of light and shade. Apart from its visual qualities, the building articulation also provides good shelter to window openings and is attuned to the orientation for sun shading.

'The adaptive re-use of the Wrigley's Chewing Gum Factory ... creatively integrated with 2 new 4 and 5-storey apartment buildings, creates a sense of authentic character and place that can otherwise be difficult to achieve successfully in new development.'

— 2019 AIA heritage commendation

Play of light

The facades of the new wings feature distinctive wedges in brick (at ground level) or concrete, providing definition and solar shading.





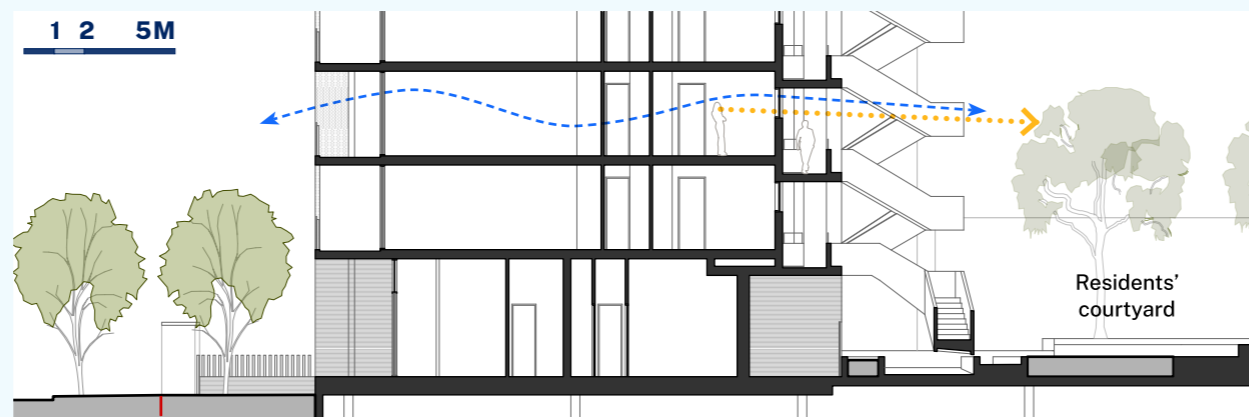
Heritage apartments

Apartments within the warehouse building strive to accentuate original features. New walls are either aligned with the pre-existing structural grid or intentionally offset to highlight distinctive round concrete columns with flared 'mushroom' capitals within the open-plan living spaces. Large steel-framed window suites maintain the existing pattern of openings and volumetric integrity of the building while containing new balcony spaces within the building envelope, effectively creating a series of wintergardens. Open slots in the window frames allow for the permanent passage of adequate fresh air to service the habitable rooms beyond.

Manipulating the section for amenity

New apartments are less constrained in layout. The western building is organised as a short double-loaded corridor with 2 units to each side and a cross-through unit per typical floor. The eastern building is arranged as corner units to the north, then as a single-loaded gallery or breezeway to the south, servicing a row of 1-bedroom apartments per typical floor (shown in plan top right and in section below). Within these

units, 3 steps immediately inside the front door raise the floor level. This sectional manipulation allows the sill of a bedroom window to face back to the gallery to provide outlook and natural cross-ventilation, without affecting visual privacy. At the ground and topmost floors, the grid of the 1-bedroom units is combined in several ways to create larger 2 and 3-bedroom units that take advantage of the opportunity for larger communal open spaces (the 3-bedroom example is shown bottom right). An open fire egress stair at the end of the gallery becomes a sculptural element within the courtyard.

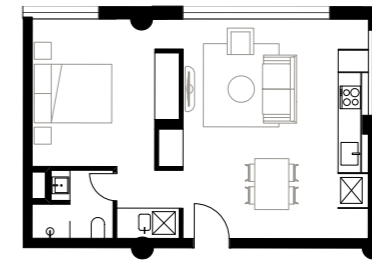


Site section

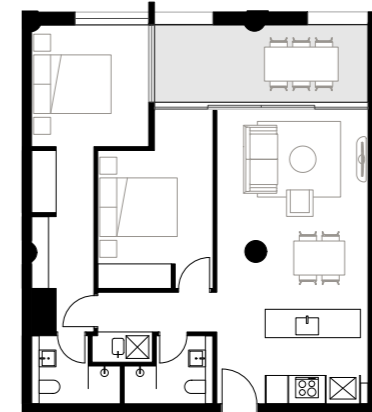
The new with the old
The apartments within the former warehouse feature 'balconies' sitting behind prefabricated glazing modules which provide permanent ventilation, grilles for kitchen and bathroom exhaust, and operable panels for resident control.

Privacy and ventilation
The western wing has a higher floor level for the apartment than for the common circulation, which allows outlook and ventilation without loss of privacy. Image: AJ+C, MAKO Architecture.

Typical apartment plans
The scale bar for all plans is included below. Plans nominated 'warehouse' are in the adapted building, others are in the new.



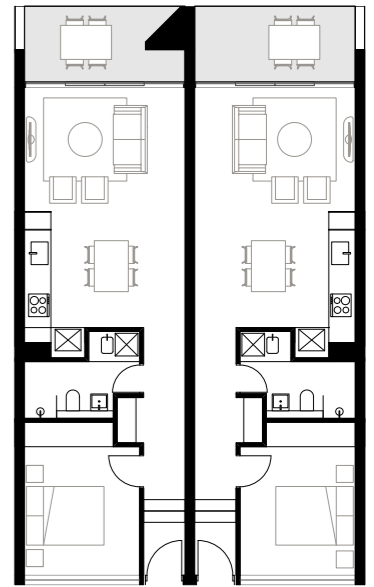
1 bedroom (warehouse)
59.5 m²



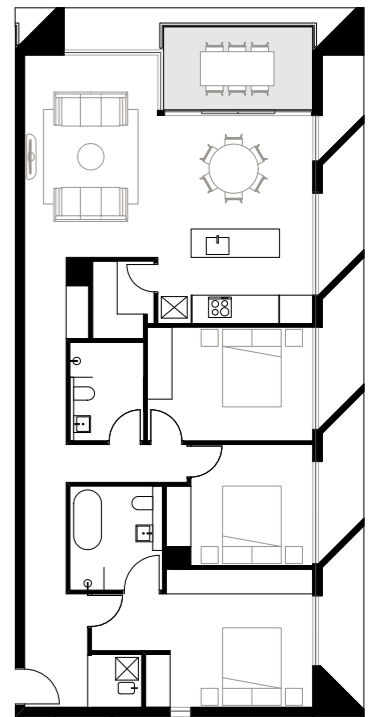
2 bedroom (warehouse)
77 m² + 12 m² private open space



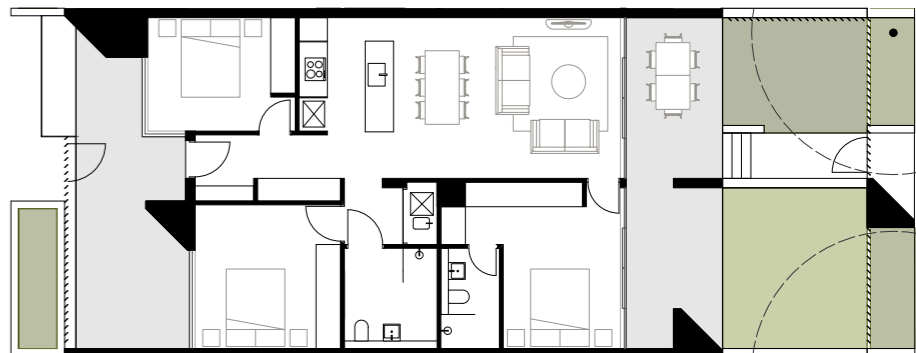
2 bedroom + study
90 m² + 9 m² private open space



1 bedroom cross-through
55 m² + 9 m² private open space



3 bedroom (adaptable to AS4299)
124 m² + 9 m² private open space



3 bedroom cross-through (ground level) (adaptable to AS4299)
102 m² + 76 m² private open space



LINE OF SIGHT TO THE APARTMENT DESIGN GUIDE (ADG)



ADG 3C PUBLIC DOMAIN INTERFACE OBJECTIVE 3C-1:

Transition between private and public domain is achieved without compromising safety and security

ADG 3G PEDESTRIAN ACCESS AND ENTRIES OBJECTIVE 3G-2:

Access, entries and pathways are accessible and easy to identify

ADG 4L GROUND FLOOR APARTMENTS OBJECTIVE 4L-1

Street frontage activity is maximised where ground floor apartments are located

The Burcham's street interface is exceptional on all 3 street frontages. Deep soil provision is concentrated on the front setbacks, thereby sharing the extensive planting and numerous established trees with the street. Direct street entries are included on Rosebery and Primrose avenues, and front fences are permeable, using level changes and landscaping to provide privacy. The main residential lobby entries are clearly defined at the junctions between old and new, and both the street, common areas and the communal courtyard are overlooked by apartments, ensuring pedestrian safety. The vehicle entry is relegated to the most minor street, and a retail outlet on the most prominent corner creates additional street activation.



ADG 3D 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

OBJECTIVE 3D-2:

Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting

The ADG recommends communal open space is equivalent to 25% of the site area. The Burcham provision is 31% at ground level, and an additional 12% is provided on the roof of the adapted building, bringing the total to 43%. Not only is the provision generous, but multiple uses are accommodated, including the conversion of the old water tower to screen movies.

ADG 4U ENERGY EFFICIENCY

OBJECTIVE 4U-1:

Development incorporates passive environmental design

OBJECTIVE 4U-3:

Adequate natural ventilation minimises the need for mechanical ventilation

Passive environmental measures, such as maximising natural light and cross-ventilation and incorporating solar shading, are supplemented by a number of active sustainability features that make this project sector-leading, including:

- re-use of existing building fabric
- embedded electrical network with a 53kW solar array (see roof plan page 2)
- energy monitoring system in each unit
- hydronic heating
- edible gardens
- electric vehicle charging
- harvested rainwater
- naturally ventilated common areas
- 2 plantation trees planted offsite for every contemporary apartment.



ADG 4R ADAPTIVE RE-USE

OBJECTIVE 4R-1:

New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place

OBJECTIVE 4R-2:

Adapted buildings provide residential amenity while not precluding future adaptive re-use

The adaptive re-use of the old warehouse infuses The Burcham with character, as well as improving the project's environmental credentials by reducing demolition waste and the embodied carbon of new fabric. Apartments feature high ceilings and retained patina, with prefabricated glazing units that keep the external factory appearance uniform but provide variations to suit internal planning. Common circulation at the junctions between old and new is emphasised with rooflighting. New fabric has heft and fine detailing in response to the existing building.

The retention of the old Wrigley's factory was a departure from the area-specific development control plan, and was driven by the winning competition scheme – the only one which proposed adaptive re-use. Subsequently it was heritage-listed, in recognition of its contribution to the character of the area.

Careful stitching

Old and new building fabric is clearly separated by common circulation which also allows unaligned floor levels to be resolved. All images: Tom Ferguson Photography.

