# SEPP 65
# PRINCIPLES

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This report is intended to be read in conjunction with the architectural drawings prepared by Fairweather Jemmott Architects and the associated consultants' reports, including Master Planning documents prepared by Tonkin Zulaikha Greer Architects.

We confirm that Paul Faireather of Fairweather Jemmott directed the design of the enclosed Development Application for Woolstore One and that the enclosed documentation achieves the principles set out in State Environmental Planning Policy 65 – Design Quality of Residential Apartment Developments (SEPP 65) and has been designed with regard to the NSW Department of Planning and Environment Apartment Design Guide (ADG).

It is noted that in accordance allowances for Adaptive Re-use within the Apartment Design Guidelines, concessions are taking consideration to various items regarding to light, air and private open space provisions.

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## INTRODUCTION

"Good design is a creative process which, when applied to towns and cities, results in the development of great urban places: buildings, streets, squares and parks.

Good design is extricably linked to its site and locality, responding to the landscape, existing built form, culture and attitudes. It provides sustainable living environments, both in private and public areas.

Good design serves the public interest and includes appropriate innovation to respond to technical, social, aesthetic, economic and environmental challenges.

The design quality principles de not generate design solutions but provide a guide to achieving good design and the means of evaluating the merit of proposed solutions."

Introduction to SEPP 65 design quality principles

The following report has been prepared to assess the proposed adaptive reuse of stage 1 of the Wickham woolstore, Newcastle with regard to the nine quality design principles of SEPP 65.
The key outcomes of the report are that the proposed adaptive re-use of the woolstore to residential complies with the SEPP 65 design quality principles.
Due to the nature, fabric and context of the existing structure, a few of the Objectives under the Apartment Design Guide fall a little short of the technical requirements. However, the existing structure offers many opportunities around light air that could not be foreseen by the ADG due to economical and practical reasons. The resulting quality of the spaces, and the access to light and air will create living environments the meet or exceed the expectations of the SEPP 65 and the ADG.

**Adaptive Re-use**

This verification report and the attached Appendix A Light and Air Strategy includes details of the concessions that are sought on the basis of a the Adaptive Re-Use of the Woolstore Building.

In response to Object 4E-1, it is proposed that some apartments utilise operable walls in place of balconies. The reasons for this strategy is to enable, where ever possible, the internal spaces of the apartments to touch the outer walls. Secondly, due to the deep nature of some of the apartments, better solar access into the apartment if facilitated by not the absence of the balcony space.

It is also noted that the Site Master Plan incorporated a large park to the North East of the site that more than compensates for the loss of private often space.

In response to Objective 4R-2, it is proposed that to ensure residential amenity is achieved, the design of the apartments includes the provision of generous voids, oversizes from and larger apartments.

PRINCIPLE 1:
## CONTEXT AND NEIGHBOURHOOD CHARACTER

"Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.

Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change."

**Wickham**
Wickham is an area in transition, evolving from its industrial past into commercial, retail and residential uses. Strategically located between the waterfront and the Pacific highway, Wickham's South-West stretch is included in the urban renewal precinct and will host the future transport interchange. Whilst the Wickham Woolstore project is not within the current Urban Renewal Precinct, the Woolstore site will be a catalyst project for its own Urban Renewal.

**Local context**
The Wickham woolstores are located on the corner of Annie & Milford street. The woolstores are part of a local context that includes a wide range of typologies. Light industrial and commercial to the East, a fuel storage facility to the North-East, commercial and low rise residential to the North and low rise residential to the South. To the West of the site a large existing woolstore has been adapted for residential use, 'Soque apartments' has become a catalyst for the development of apartments to the north that reinforce the local density and character.
The woolstores have a direct pedestrian connection with Wickham Park and nearby community facilities to the South via the existing laneway network. The proposed new laneway between woolstores 1 & 2 follows the same pattern and will connect to the existing network and respond to the existing streetscape.

Woolstore 1 is located within 800 meters of the Hamilton railway station (10 min walk) and 1.4 km (18 min walk) of the future transport interchange (light rail network) plus multiple bus stops nearby, the woolstores offer multiple accessibility options. The local centre is to the South West of the site, and is focused around Beaumont street where a variety of food, retail, and entertainment outlets add to the village character of the street.

**Vision**
Using a long term, coordinated approach to the site and its context, the development will significantly enhance the public domain, with improved streetscape on Milford and Annie streets, and street activation brought by residents and visitors. The woolstore re-purpose has the potential to be a reference development within the local context and will reinforce the urban renewal initiated along Milford street.

PRINCIPLE 2:
## BUILT FORM AND SCALE

"Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook."

**Existing Building**

The Wickham woolstores site consists mainly three near identical woolstores.
The proposed stage 1 of the master planned development incorporates the adaptive reuse of one of the woolstores, on the western edge of the site. Woolstore 1 has two substantial street frontages, one onto Milford street to the West, the other towards Annie street to the south. To the East, the site is separated from the neighbouring Woolstore by a laneway, and to the north lies an empty plot potentially suitable for future development.
The existing building is a 4 storey woolstore, approximately 100m long and 40m wide and a 19.5 meters high (measured to the apex of the roof) with a East-West aspect. Its structural grid is 4m x 4.25m with a varying floor to floor height from 3.4m to 3.7m and a larger height on the top floor varies in height from 4.2m to 7.2m at its highest.

**Preserve the identity**

As part of the urban renewal strategy, the recognition of Newcastle's heritage initiative, advises to "Retain and re-purpose heritage buildings that contribute to the character and history of the city". The proposal for the heritage listed Wickham Woolstore is in accordance with this precept and aims at primarily preserving the original built form. The scheme does not modify the footprint or height of the historic building, and its envelope remains largely untouched. The development is an effort to integrate the building's industrial past with current standards of living, thus reinforcing the area's architectural character by preserving a local landmark. The exposed structural grid will be maintained, though the new openings and fenestration will be clearly identified as new interventions.

PRINCIPLE 2:
BUILT FORM AND SCALE - CONTINUED

**Street Activation**
The " townhouses" to the lower levels along the Milfrod Street frontage will have direct access to the street. These townhouses incorporate raised terraces/courtyards that are within the building line. The "townhouses" along the laneway between the Woolstores to the East, have courtyards open to the sky. These courtyards are accessed by a shared pedestrian and vehicular laneway. The courtyards and balconies to both Milford Street and the laneway offer a transition between public and private domains. All of the other balconies are within the existing form of the building.
The existing main entry to Annie Street will be maintained while a new entry to the northern end will be made. These multiple entry points will create the desired activation at ground level and offer ease of access to residents.

**Carpark**
The two storey Carpark, within the building, is primarily hidden from the public realm and participates to the low impact intention of the scheme. Given the existing 4m structural grid, a one way car park arrangement has been adopted.

**Neighbouring buildings**
The height of the existing Woolstore is approximately 19 meters. The ADG requirement for separation between windows and balconies is 9 meters between habitable rooms and balconies and reduces to 4.5 meters between non-habitable rooms. The 13m separation provided by the laneway is sufficient to guarantee privacy between buildings.

## Principle 3:
## DENSITY

"Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.

Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment."

The proposed development has an FSR of 4:1. Refer to the Master Plan document for the overall allowable and proposed FSR for the entire site. The existing building has total gross floor area of 17,740 m2.
The proposed gross floor area (including the percentage of excess car parks above required amount [21/17.35%], circulation and apartments) of 13,534 m2 is achieved by adding mezzanine area to the top level apartments.
The proposed development comprises a total of 100 apartments including a mix of 1, 2 and 3 bedroom apartments and the associated carparking and common circulation areas.

The density of Woolstore One is comparable to that of the Soque Woolstore located in Milford Street on a floor to floor basis. The overall density of the proposed adaptive reuse is also comparable with other developments of a similar nature.
The proposed Woolstore One scheme comprises a total of 100 apartments including a mix of 1, 2 and 3 bedroom apartments and the associated carparking and common circulation areas.

## Principle 4:
## SUSTAINABILITY

"Good design combines positive environmental, social and economic outcomes.

Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation."

While working within the limits of the existing building, the proposed scheme demonstrates good passive sustainable design principles. To achieve the best possible outcome, special attention is brought to natural ventilation, sunlight and material reuse.

**Solar access and Ventilation**
The existing woolstore has a North-South orientation, providing good solar access to the long elevations, particularly to the West. The proximity to the neighbouring Woolstore creates some challenges to solar access to the eastern facade, with some overshadowing occurring on the eastern facade during the mid-winter months (refer Appendix 1-Light & Air Strategy).
Each apartment takes advantage of the existing window openings to provide direct sunlight and ventilation to living areas and most bedroom rooms.
Due to the depth of the existing floor plan, there is a number of single aspect apartments, most of which facing East or West. For apartments not located on corners or are double story, they achieve natural cross ventilation via the primary window augmented with one of the stack effect based strategies developed in the 'Light & Air Strategy'. Those strategies, mostly involving the South roof light, also bring daylight to the rear of Level 3 apartments.
The appropriate amount of shading and glare control have been incorporated into each of the new window conditions.
As a result of this integrated strategy, solar access to living areas meets minimum requirements, with only 4% of apartments receiving no direct sunlight between 9am and 3pm at mid-winter. Due to the adaptive reuse nature of the development and its existing context (building orientation and proximity of the neighbouring woolstore) the 2 hour of direct sunlight requirement is not achieved, with a total of 88.5% of apartments receiving at least 1 hour of direct sunlight but only 44% of all apartments receiving 2 hours (shadow cast by the woolstore to the East).
Natural Cross ventilation of apartments meets requirements with 74% of apartments being naturally cross-ventilated.

**Reuse of materials**
The existing lifts and stairs will be reused where possible. Also, where everwherever possible existing materials such as bricks, timber etc will be recycled and used in the proposed alterations.

**Deep Planting**
An overall site deep planting strategy has been developed in the open space and landscaping strategy. The portion required for Stage 1 will be included in this strategy.

PRINCIPLE 5:
## LANDSCAPE

"Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.
Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks.
Good landscape design optimises useability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity and provides for practical establishment and long term management."

Two key design elements informed the landscape concept design.
Firstly, the new communal park located to the north of Woolstore 1. Refer to the Master Plan document for this propsoalproposal.
Secondly, the enhancement of the streetscapes and the laneway between woolstores 1 & 2 with integrated courtyard and terraces.

**Laneway and Streetscape**
All townhouses on ground have access to individual courtyards and terraces, integrated into the structure for those along Milford street and outside the structure in the laneway. In both cases integrated landscape helps soften the raised terraces to the laneway and street.

PRINCIPLE 6:
## AMENITY

"Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being. Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility."

**Circulation**
The central circulation space is experienced as a fertile internal street, with direct access to natural daylight and ventilation through the existing south lights. Its configuration providing a rich experience (4m min width, multiple voids, landscaping) allowing visual connection and communication between levels 3 and 4.

**Vehicle access and parking**
All residents car parking is accommodated internally, on levels 1 & 2, close to dwellings. Bicycle, scooters and motorbike parking facilities are also provided.

**Comfortable Apartments**
Generously sized apartments provide good amenity is to residents, with the ADG minimum sizes exceeded by an average 65%, plus higher than average ceiling heights (min. 3000mm max 7200mm) greatly improving the sense of space due to increased volumes. . The additional ceiling height allows for a proportional increase depth of the apartment. The proposed layouts are designed not only to be sizable but also functional and efficient, with all bedrooms and bathrooms grouped within close proximity, and open plan kitchen, dining and living areas to all apartments highlighting the original spatial qualities of the building. In accordance with the design guidelines, all living rooms and outdoor areas are located on the external face of the building.

The separation with neighbouring buildings complies with the requirements, ensuring good visual privacy to all apartments on the upper floors. A privacy strategy has been developed for the window frontage the laneway to maintain visual privacy. This strategy allows the residents to obtain privacy without compromising access to light and ventilation.

The apartments have been planned to accommodate a variety of household activities. All bedrooms, living and dining rooms comply with the minimum requirements.
Apartments provide appropriately sized private open space and balconies to enhance amenity. The balconies are generally located at the front of the apartments on the two and three bedroom apartments and a rear courtyard is provided for the one bedroom apartments on level 3.

| Apartment Type | Area | Balcony Area | Depth |
|---|---|---|---|
| 1 Bed, 1 bath | 68 | 0m$^2$ | 0m |
| 1 Bedroom, 1 bathroom (Level 3) | 68 | 5.6m$^2$ | 1.40m |
| 2 Bedroom, 2 bathrooms | 123 | 17m$^2$ | 4.25m |
| 3 Bedroom, 2 bathrooms | 170 | 17m$^2$ | 4.25m |

PRINCIPLE 7:
## SAFETY

"Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.

A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose."

**Passive Surveillance**
Windows and balconies to the upper levels overlook the public domain thus providing passive surveillance by residents. Ground floor apartment terraces and courtyards give added surveillance to the Laneway and Millford Street.
Internal walkways are wide (min 4 meters( with good sight lines).

PRINCIPLE 8:
## HOUSING DIVERSITY AND SOCIAL INTERACTION

"Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix.

Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among

**Diversity**
After being disused for many years, the building enters a new stage of its life and Warehouse 1 is part of larger mixed use development that provides a diverse range of uses that aims to deliver a vibrant community. The apartments have been planned to accommodate a variety of household activities. All bedrooms, living and dining rooms comply with the minimum requirements.
The higher than average ceiling heights will and has contributed to the flexibility of building use over the life of the building.

**Places to meet**
The circulation zone within the upper storeys of the building has a generous width and has a double storey height that benefits from natural daylight and ventilation from the existing south lights.

**Apartment types**
There is a variety of apartment types on offer to satisfy a broad demographic for either purchase or rent.
One Bedroom. Large one bedroom plus study to allow for flexible options or live work options for young couples and singles, as well as students.
Two Bedroom. Flexible large 2 bedroom apartments suitable for couples or small young families
3 Bedroom Townhouse. Family homes with direct street access and ground level courtyards
3 Bedroom Mezzanine apartments. Large 3 bedroom apartments with 7.2m ceilings for well off couples or small families

The existing structural grid of the building enables the apartment layouts to be larger than the markets standards. Below is a schedule of the typical apartment sizes.

| Apartment Type | Average Internal Area |
|---|---|
| 1 Bed 1 bath | 68m$^2$ |
| 2 Bed 2 bath | 123m$^2$ |
| 3 Bed 2 bath | 170m$^2$ |

PRINCIPLE 9:
## AESTHETICS

"Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape."

**Industrial Heritage**
The existing facade of the heritage listed building is concrete frame with brickwork infill.
The strategy for the adaptive reuse is one of repairing and retaining the existing underlying structural fabric of the building as the predominant language of the building. The brickwork infill will be retained both internally and externally where possibleThe next layer is the retention of most, but not all of the brickwork infill, both internally and externally. It is these two elements that communicate the essential character of the building.

New openings occupy the space between the frames. These interventions clearly communicate the adaptive reuse, however at the same time retains the bulk , scale and materiality that also communicates the original use and nature of the building.
Wherever possible internally the existing materials and paraphernalia will be retained, subject to the requirements of sound and fire ratings.

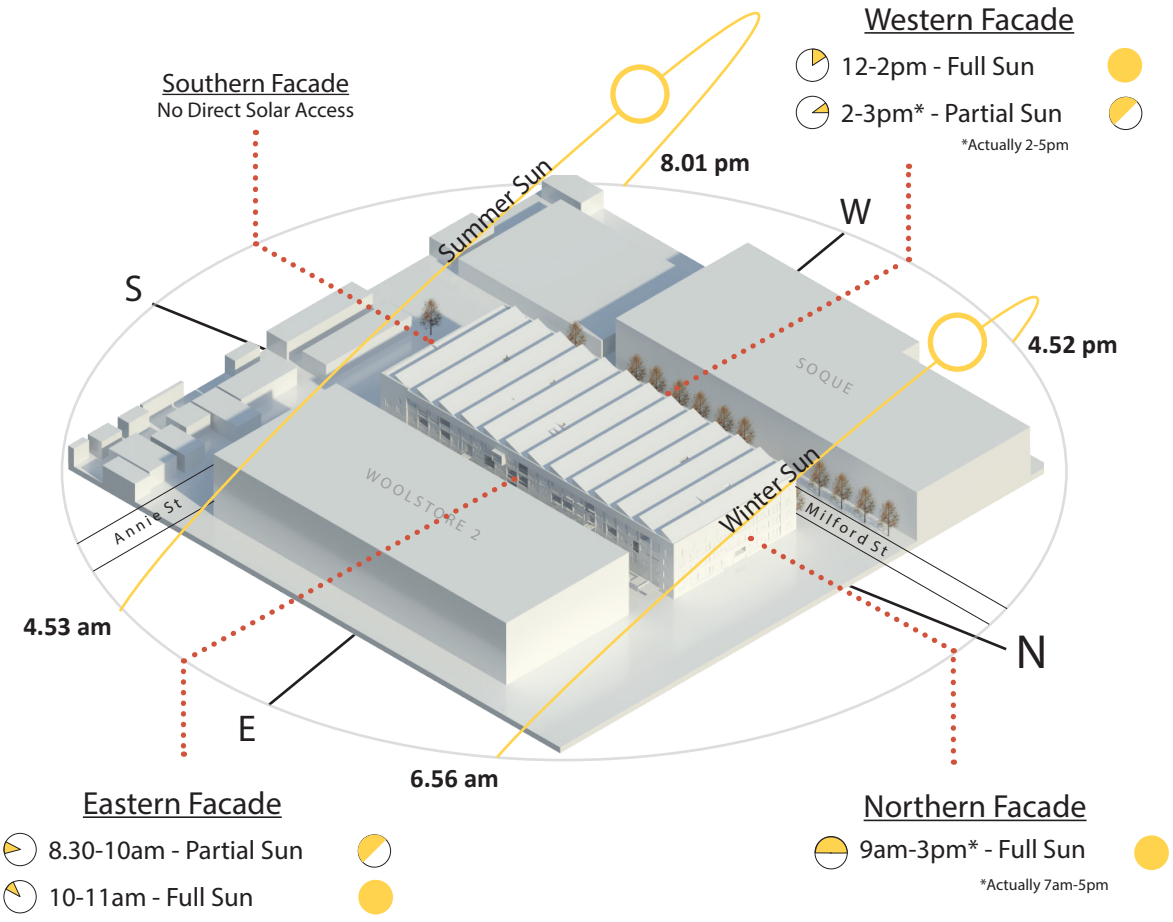
APPENDIX ONE

# LIGHT & AIR STRATEGY

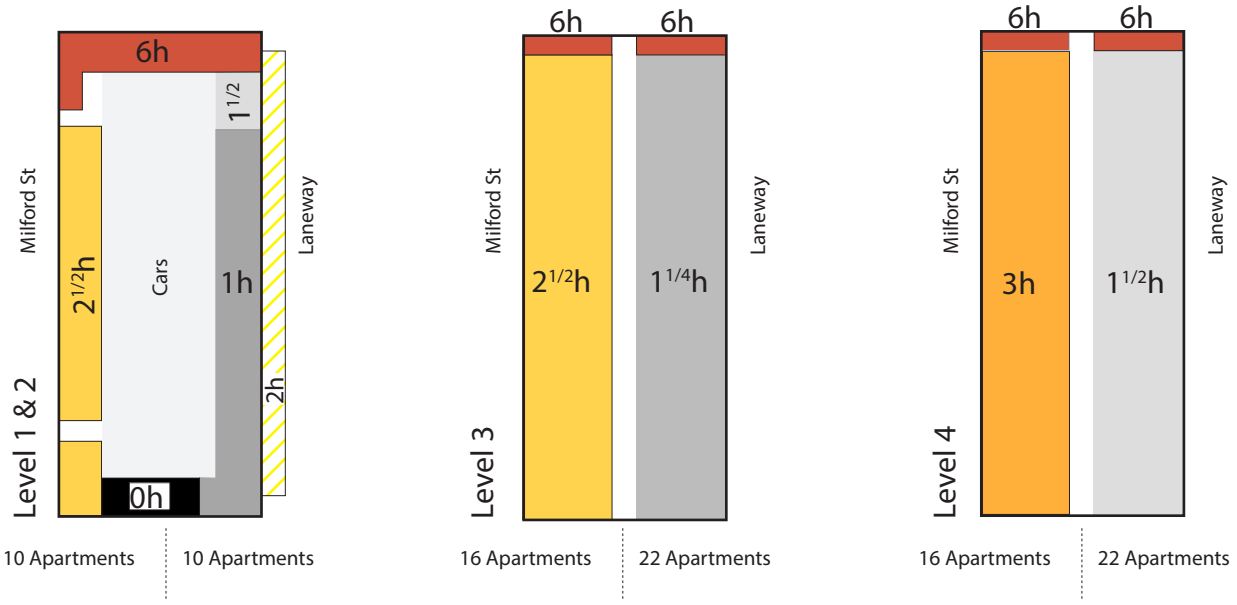
Challenges to the adaptive reuse of heritage buildings

Objective 4A-1
To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.

Design Criteria:
*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.*
*2. 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.*



## Solar Access




Hours of direct solar access per apartment at mid-winter

## Conclusion

According to their location in the building, apartments have variable solar access.
Direct sunlight access is **best for West and North facing** apartments, with 100% compliance for all apartments (all living and open spaces receiving a minimum of 2 hours of direct sunlight.
On the other hand, apartments facing East or South don't perform as well, although better in upper levels, with a majority not complying with the ADG criteria.

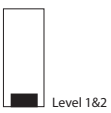
Objective 4A-1 Design Criteria 1



57% of apartments receive at least 2 hours of direct sunlight at mid-winter in their living rooms and/or private open areas. (57/100)

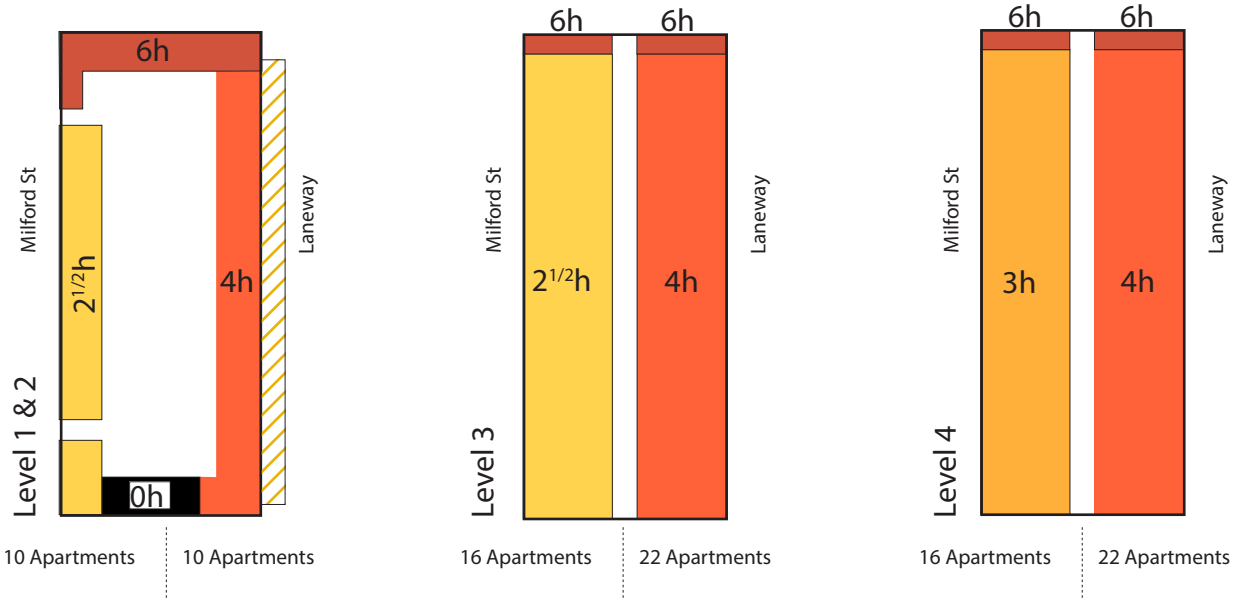

Objective 4A-1 Design Criteria 3

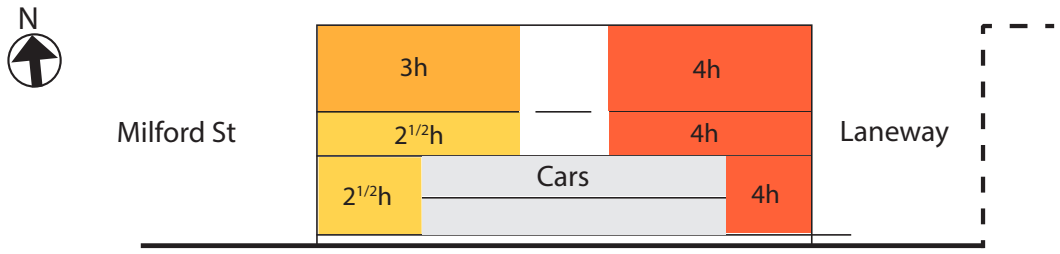
3% of apartments receive no direct sunlight at mid-winter (3/100)



## Solar Access Impact of Context

Solar access summary with no neighbouring woolstore to the East:




Hours of direct solar access per apartment at mid-winter

Objective 4A-1 Design Criteria 1



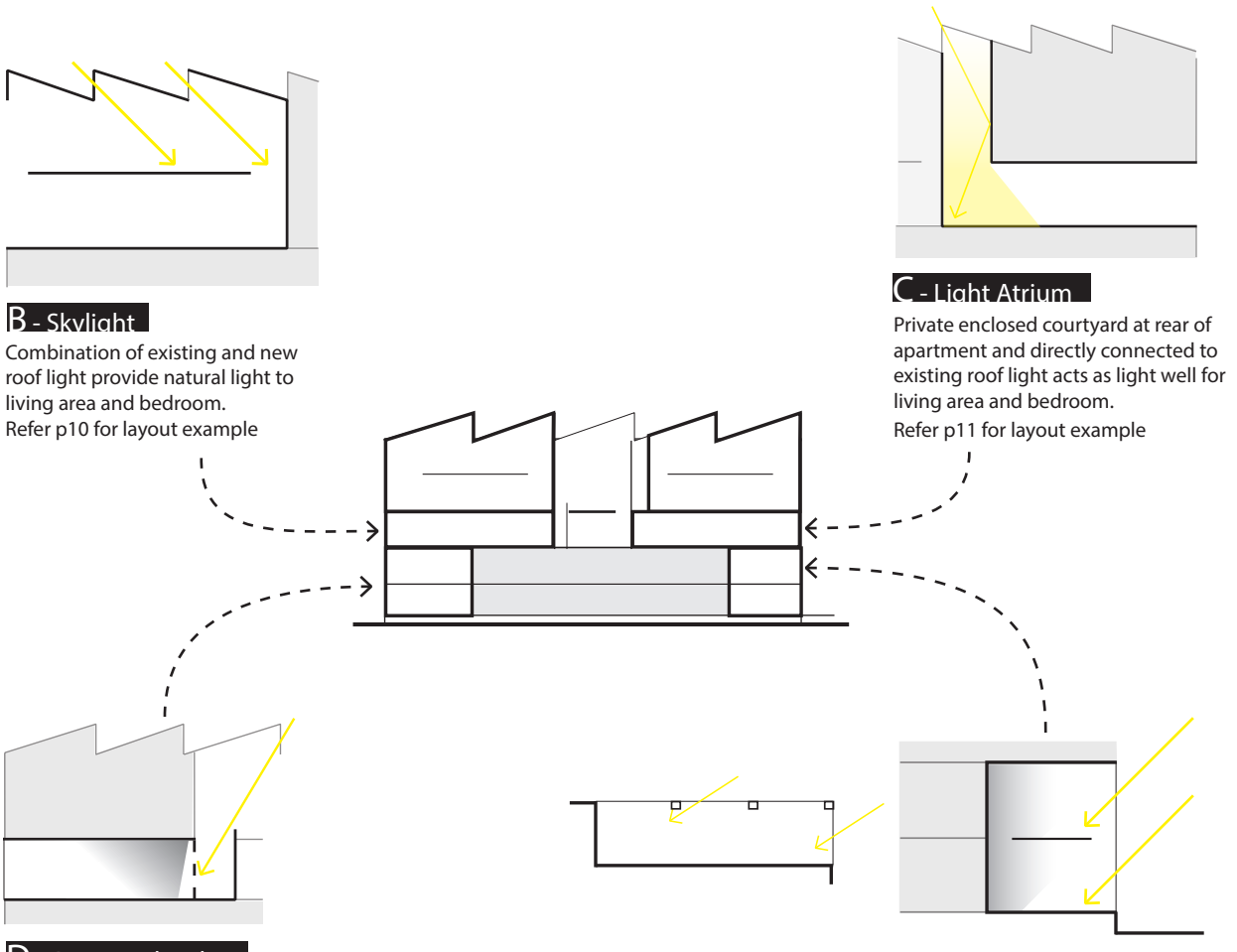
Without the neighbouring woolstore to the East, living rooms and open areas of 97% of apartments would receive at least 2 hours of direct sunlight at mid-winter. (97/100)


Conclusion
It is the context of the siting of existing building that impacts the solar access, not the proposed design.

Objective 4 A-2
Daylight access is maximised where sunlight is limited

## LIGHT SOURCE STRATEGY

Due to the nature of existing building (overall dimensions and structural grid), many apartments are single aspect with a narrow layout. Such layouts present a challenge in achieving cross ventilation and natural light access to the rear of apartments.
To meet those challenges, different strategies are developed depending on apartment configuration and location in building. Although not always technically complying, the following strategies to bring natural light to the apartments do comply in intent.
The nature and fabric of the existing building offers opportunities which could not be considered in the ADG due to economical and practical reasons.



**B - Skylight**
Combination of existing and new roof light provide natural light to living area and bedroom.
Refer p10 for layout example

**C - Light Atrium**
Private enclosed courtyard at rear of apartment and directly connected to existing roof light acts as light well for living area and bedroom.
Refer p11 for layout example

**D - Borrowed Light**
Private courtyard open to common circulation area provides light and ventilation to bedroom at rear of apartment.
Refer p12 for layout example

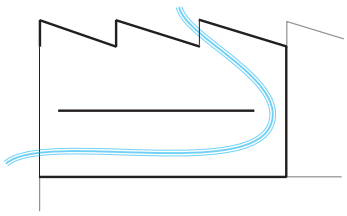
**A - Direct Sunlight/Daylight**
All rooms are located on external face of building and benefit from direct solar access.
Refer p9 for layout example

## VENTILATION

Objective 4B-3
The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.

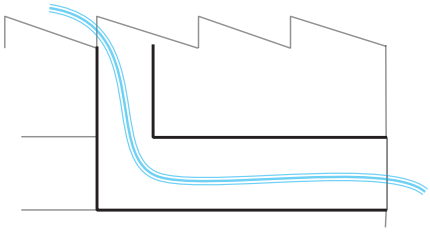
Design Criteria
*1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed.*
*2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.*

Strategies used for daylight access also apply to provide ventilation through stack effect:



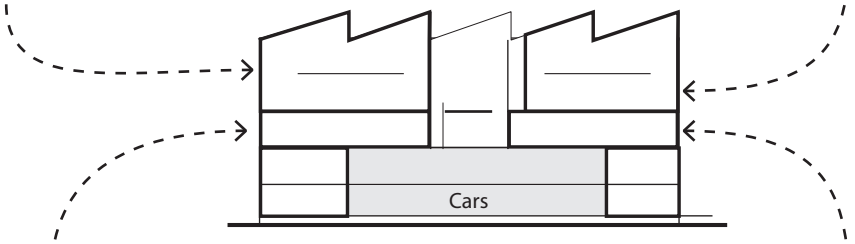
**B - Ventilation through Skylight**

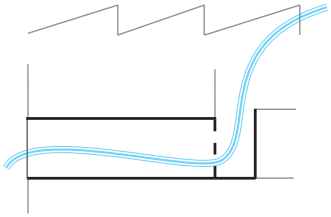
Refer p10 for layout example



**C - Ventilation through Light Atrium**

Refer p11 for layout example

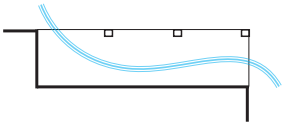


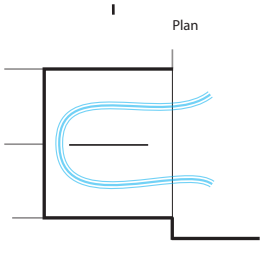
**D - Ventilation through Walkway**

Private courtyard open to common circulation area provides light and ventilation to bedroom at rear of apartment.

Refer p12 for layout example



Corner apartment



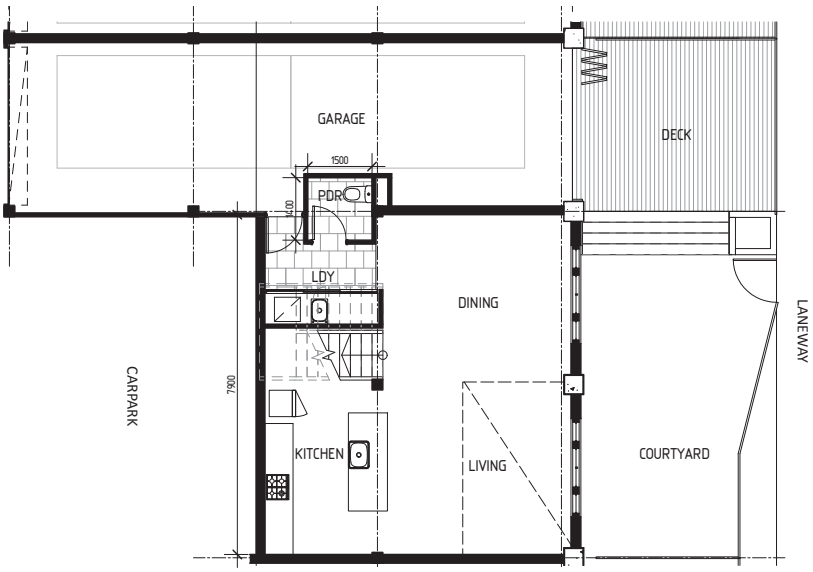

**A - Ventilation over 2 Levels**

All rooms are located on external face of building and benefit from direct solar access.

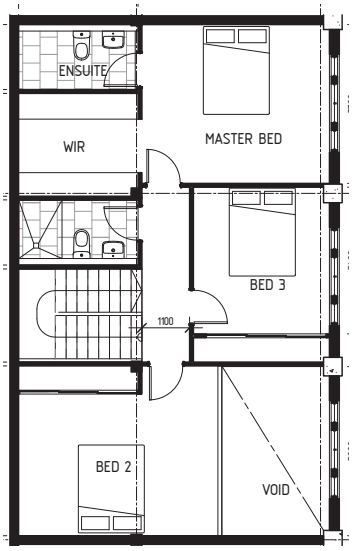
Refer p9 for layout example

**74%** of Apartments are naturally cross ventilated

A - Direct Sunlight/Daylight

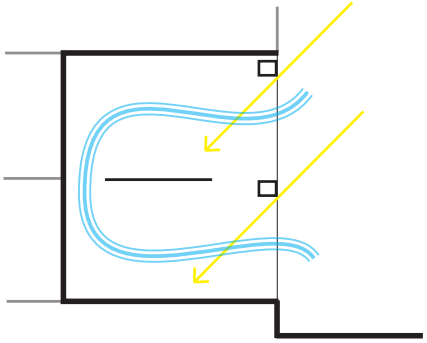


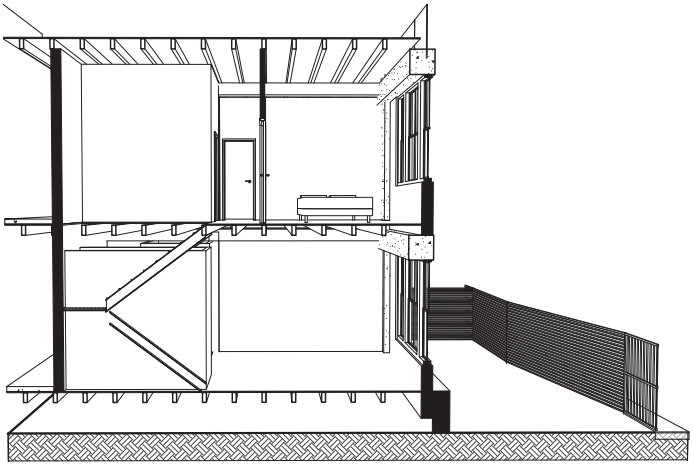

Lower Level



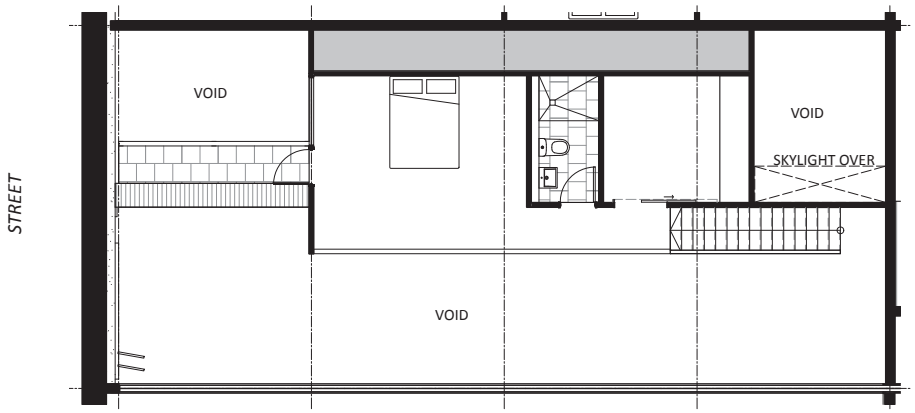

Upper Level

UNIT TYPE C1
- Level 1 & 2
- 3 Bed Townhouse
- 2 Levels
- Single aspect (East or West facing)
- 3 Bay wide
- External windows to all rooms

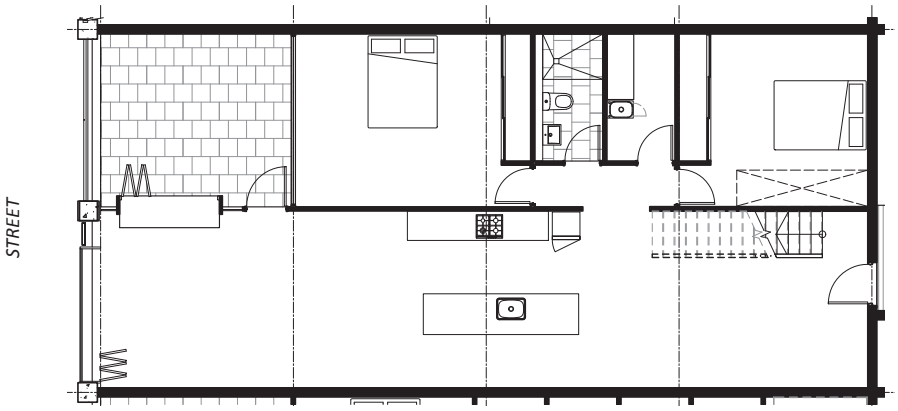




B - Skylight

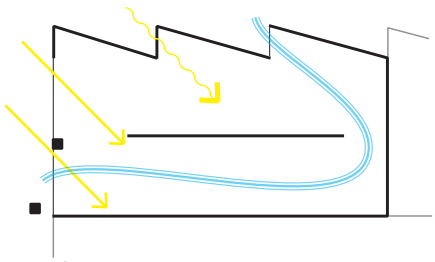



Mezzanine

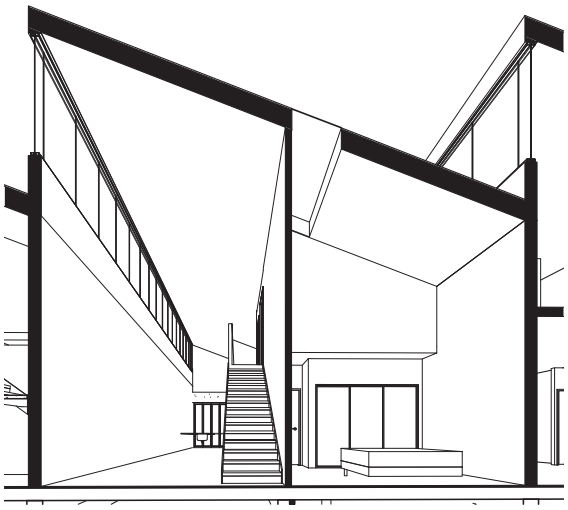



Lower Level

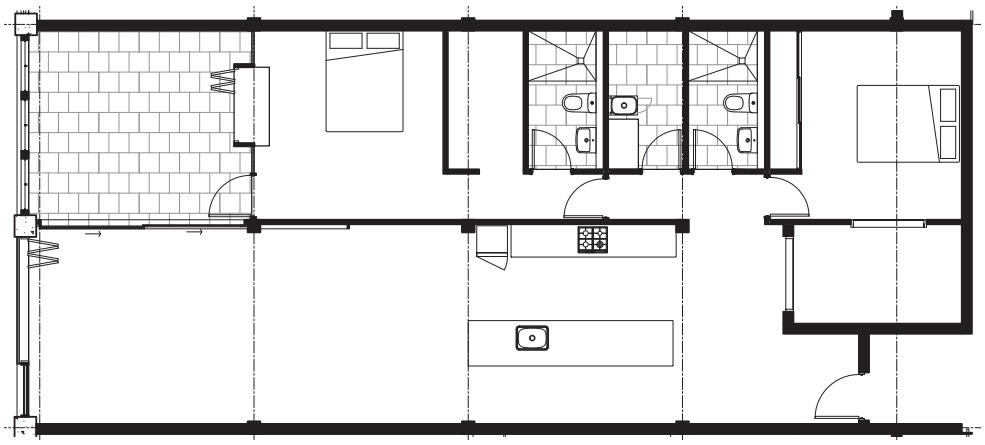
UNIT TYPE C3
- Level 4
- 3 Bed Loft
- 2 Levels
- Dual aspect
- 2 Bay wide
- Skylights

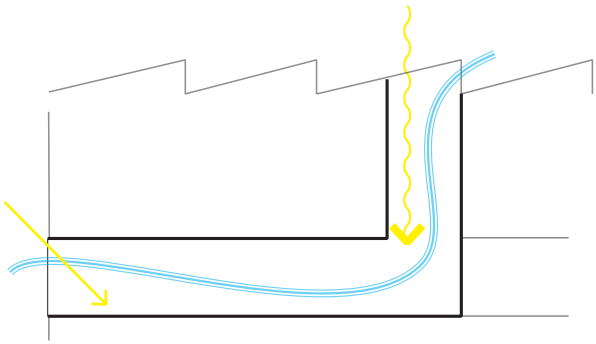


Section



C - Light Atrium





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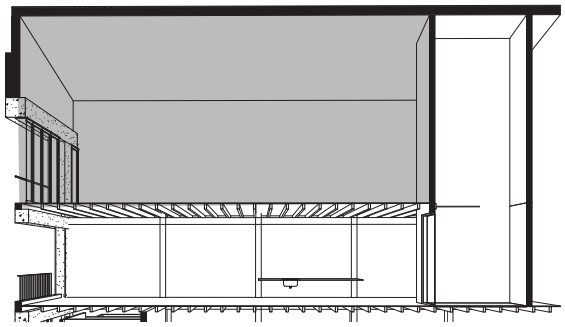
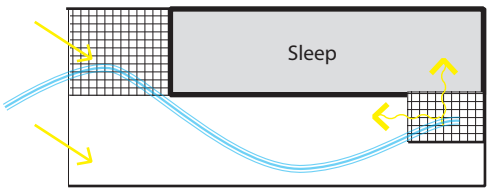
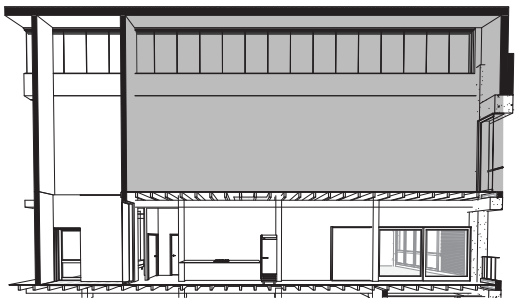


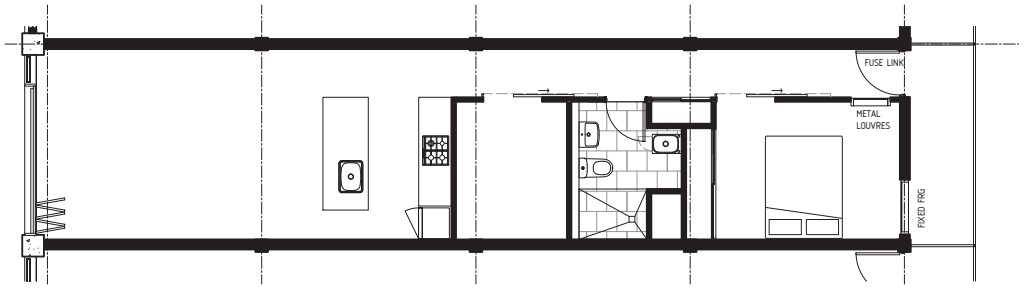


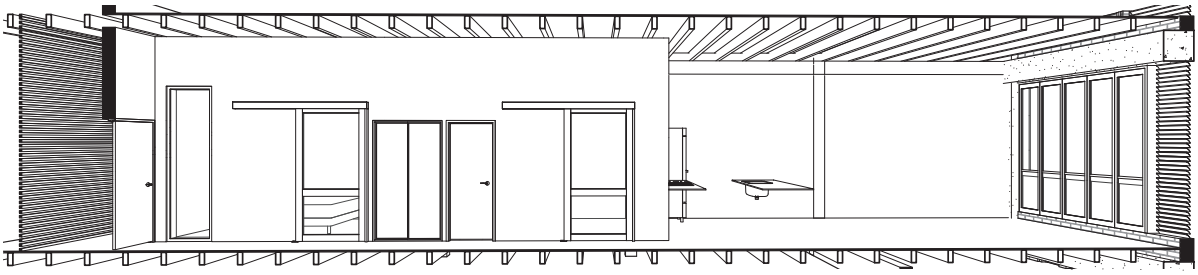

Plan

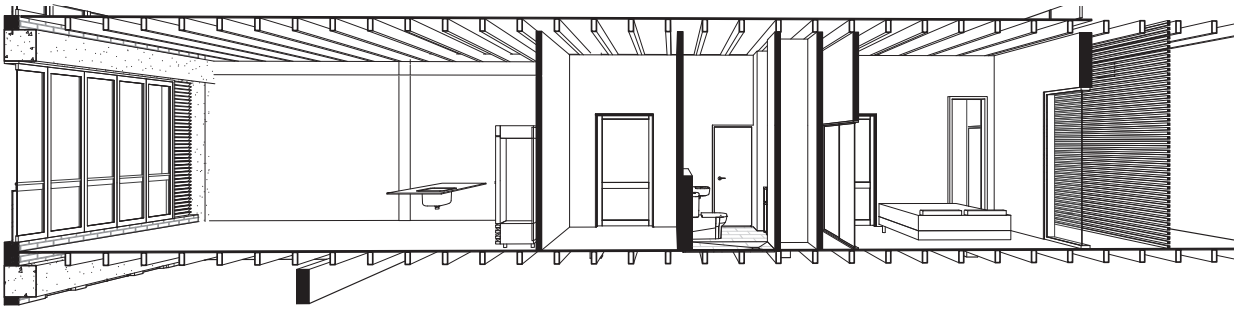


UNIT TYPE B1
- Level 3
- 2 Bed Apartment
- Single aspect
- 2 Bay wide
- Light atrium at rear

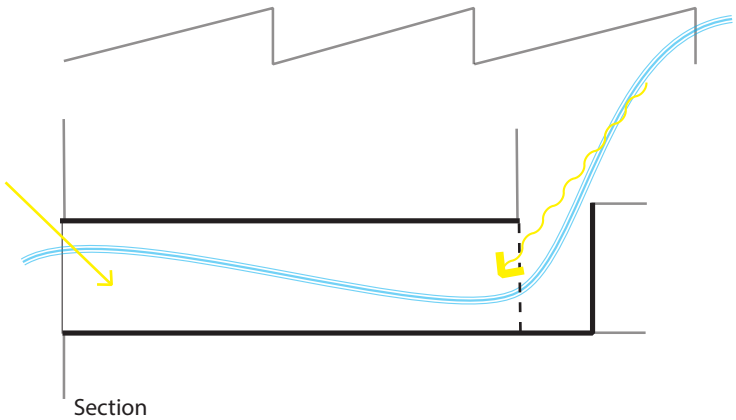
D - Borrowed Light





UNIT TYPE A1
- Level 3
- 1 Bed Apartment
- 1 Bay wide
- Single aspect
- Borrowed light at rear



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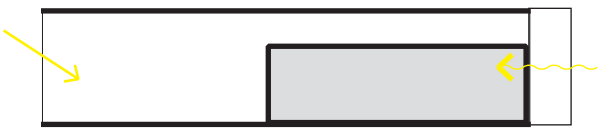

Plan

# Wickham Woolstores Apartment Design Objectives Summary

| OBJECTIVE | DESIGN CRITERIA | COMPLIANCE | NOTES & ALTERNATE SOLUTION TO MEET OBJECTIVE |
|---|---|---|---|
| **Part 3 SITING THE DEVELOPMENT** | | | |
| **Site Analysis** | | | |
| **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 | | YES | |
| **Orientation**<br>**3B-1** - Building types and layouts respond to the streetscape and site while optimising solar access within the development | | N/A | |
| **3B-2** - Overshadowing of neighbouring properties is minimised during mid winter | | N/A | |
| **Public Domain Interface**<br>**3C-1** Transition between private and public domain is achieved without compromising safety and security | | YES | |
| **3C-2** Amenity of the public domain is retained and enhanced | | YES | |
| **Communal and Public Open Space**<br>**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<br>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) | N/A | Ref. Masterplan DA |
| **3D-2** Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting | | N/A | Ref. Masterplan DA |
| **3D-3** Communal open space is designed to maximise safety | | N/A | Ref. Masterplan DA |
| **3D-4** Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood | | N/A | Ref. Masterplan DA |
| **Deep Soil Zones**<br>**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 | 1. Deep soil zones are to meet the following minimum requirements | | Ref. Masterplan & Landscape Report |
| **Visual Privacy**<br>**3F-1** Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy | 1. 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: | YES | 13m separation with neighbouring building to the East |
| **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 | | YES | |
| **Pedestrian Access and Entries**<br>**3G-1** Building entries and pedestrian access connects to and addresses the public domain | | YES | 2 main pedestrian access plus private townhouses entries |
| **3G-2** Access, entries and pathways are accessible and easy to identify | | YES | Re-use of existing main pedestrian entry |
| **3G-3** Large sites provide pedestrian links for access to streets and connection to destinations | | N/A | |
| **Vehicle Access**<br>**3H-1** Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes | | YES | |
| **Bicycle and Car Parking**<br>**3J-1** Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas | 1. For development in the following locations:<br>on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or<br>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<br>The car parking needs for a development must be provided off street | YES | Refer Masterplan DA for visitor carparking |
| **3J-2** Parking and facilities are provided for other modes of transport | | YES | Motorbike and Bicycle parking provided for all apartments |
| **3J-3** Car park design and access is safe and secure | | YES | Refer Traffic Report |
| **3J-4** Visual and environmental impacts of underground carparking are minimised | | N/A | |
| **3J-5** Visual and environmental impacts of on-grade car parking are minimised | | YES | Resident carparking inside building, sleeved behind townhouses, not visible form street<br>Refer Masterplan DA for visitors. |
| **3J-6** Visual and environmental impacts of above ground enclosed car parking are minimised | | YES | All carparking inside building, sleeved behind townhouses not visible form street |
| | | | |
| **Part 4 DESIGNING THE BUILDING** | | | |
| **Solar and Daylight Access**<br>**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. | NO | Refer 'Light & Air Strategy' report |
| **4A-2** Daylight access is maximised where sunlight is limited | 3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter | YES | Only 4% of apartments receive no direct sunlight,<br>Refer 'Light & Air Strategy' report. |
| | | YES | Refer 'Light & Air Strategy' report |
| **4A-3** Design incorporates shading and glare control, particularly for warmer months | | YES | Window sized accordingly, screen if needed |
| **Natural Ventilation**<br>**4B-1** All habitable rooms are naturally ventilated | | YES | Refer 'Light & Air Strategy' report |
| **4B-2** The layout and design of single aspect apartments maximises natural ventilation | | YES | Refer 'Light & Air Strategy' report |

| | | | |
|---|---|---|---|
| **4B-3** The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents | 1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building.<br><br>2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line | YES<br><br>N/A | Via naturally ventilated atriums. Refer 'Light & Air Strategy' report |
| **Ceiling Heights**<br>**4C-1** Ceiling height achieves sufficient natural ventilation and daylight access | 1. Measured from finished floor level to finished ceiling level, minimum ceiling heights are: | YES | 2.8m average floor to ceiling height |
| **4C-2** Ceiling height increases the sense of space in apartments and provides for well proportioned rooms | | YES | |
| **4C-3** Ceiling heights contribute to the flexibility of building use over the life of the building | | YES | |
| **Apartment Size and Layout**<br>**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:The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m2 each<br>A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m2 each | YES | Apartments are bigger than ADG requirements by an average xx% |
| | 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 | NO | 12% of rooms have a window to internal courtyards, which open on the common circulation area. 88% of bedrooms have a window in an external wall (direct or light well). Refer 'Light & Air Strategy' report |
| **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 | YES | Refer DA drawings for apartment layouts |
| | 2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window | NO | Skylight access to rear of apartments. Refer 'Light & Air Strategy' report |
| **4D-3** Apartment layouts are designed to accommodate a variety of household activities and needs | 1. Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space) | YES | All bedrooms minimum 14m2<br>All bedrooms minimum 4m wide (structural bay width) |
| | 2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space) | YES | Refer DA drawings for apartment layouts |
| | 3. Living rooms or combined living/dining rooms have a minimum width of:<br>3.6m for studio and 1 bedroom apartments<br>4m for 2 a | YES | Refer DA drawings for apartment layouts |
| | 4. The width of cross-over or cross-through apartmentsd 3 bedroom apartments are at least 4m internally to avoid deep narrow apartment layouts | N/A | |
| **Private open space and balconies**<br>**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: The minimum balcony depth to be counted as contributing to the balcony area is 1m | NO | All apartments to have open private space,<br>except 1 bed on level 3 & 4 and 2 bed on level 3 . Operable walls are proposed in lieu of balconies in accordance with Adaptive Re-use provisions. In addition , masterplan includes large park to the north east of the site. |
| | 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 | YES | |
| **4E-2** Primary private open space and balconies are appropriately located to enhance liveability for residents | | YES | |
| **4E-3** Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building | | YES | Private open space is integrated to existing structure. |
| **4E-4** Private open space and balcony design maximises safety | | YES | |
| **Common Circulation and Spaces**<br>**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 | NO | Not achievable due to nature of existing buildings and Heritage Management Guidelines to maximise visual readability of public space. |
| | 2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40 | N/A | |
| **4F-2** Common circulation spaces promote safety and provide for social interaction between residents | | YES | Circulation space creates interest, encourages social interaction. |
| **Storage**<br>**4G-1** Adequate, well designed storage is provided in each apartment | 1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: At least 50% of the required storage is to be located within the apartment | YES | Refer DA drawings for apartment layouts |
| **4G-2** Additional storage is conveniently located, accessible and nominated for individual apartments | | YES | Refer DA drawings for apartment layouts |
| **Acoustic Privacy**<br>**4H-1** Noise transfer is minimised through the siting of buildings and building layout | | N/A | |
| **4H-2** Noise impacts are mitigated within apartments through layout and acoustic treatments | | YES | Refer DA drawings for apartment layouts.<br>Bedrooms are grouped, adjacent living areas. |
| **Noise and Pollution**<br>**4J-1** In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings | | N/A | |
| **4J-2** Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission | | YES | |
| **Apartment Mix**<br>**4K-1** A range of apartment types and sizes is provided to cater for different household types now and into the future | | YES | The proposed development has over 10 different layouts form 1 bed 55 sqm to 3 bed + study 170 sqm |
| **4K-2** The apartment mix is distributed to suitable locations within the building | | YES | 1, 2, 3 bedroom apartments are distributed though every level of the building |
| **Ground Floor Apartments**<br>**4L-1** Street frontage activity is maximised where ground floor apartments are located | | YES | Ground floor apartments to the Easrt and West have courtyards to the street |
| **4L-2** Design of ground floor apartments delivers amenity and safety for residents | | YES | 1m vertical separation with street provides privacy |
| **Facades** | | | |

| | | | |
|---|---|---|---|
| **4M-1** Building facades provide visual interest along the street while respecting the character of the local area | | YES | Heritage listed façade maintained and restored, existing fabric is preserved |
| **4M-2** Building functions are expressed by the facade | | YES | |
| **Roof**<br>**4N-1** Roof treatments are integrated into the building design and positively respond to the street | | YES | Heritage listed façade maintained and restored, existing fabric is preserved |
| **4N-2** Opportunities to use roof space for residential accommodation and open space are maximised | | N/A | |
| **4N-3** Roof design incorporates sustainability features | | YES | Roof openings plays a key part in the strategy |
| **Landscape**<br>**4O-1** Landscape design is viable and sustainable | | YES | Refer Landscape Report |
| **4O-2** Landscape design contributes to the streetscape and amenity | | YES | Refer Landscape Report |
| **Planting on Structures**<br>**4P-1** Appropriate soil profiles are provided | | YES | Refer Landscape Report |
| **4P-2** Plant growth is optimised with appropriate selection and maintenance | | YES | Refer Landscape Report |
| **4P-3** Planting on structures contributes to the quality and amenity of communal and public open spaces | | YES | Refer Landscape Report |
| **Universal Design**<br>**4Q-1** Universal design features are included in apartment design to promote flexible housing for all community members | | YES | Access Ramp |
| **4Q-2** A variety of apartments with adaptable designs are provided | | YES | Open plan kitchen, dining and living area to all apartments |
| **4Q-3** Apartment layouts are flexible and accommodate a range of lifestyle needs | | YES | Open plan kitchen, dining and living area to all apartments |
| **Adaptive Reuse**<br>**4R-1** New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place | | YES | |
| **4R-2** Adapted buildings provide residential amenity while not precluding future adaptive reuse | | YES | Minimal impact on existing structure |
| **Mixed Use**<br>**4S-1** Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement | | N/A | |
| **4S-2** Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents | | N/A | |
| **Awnings and Signage**<br>**4T-1** Awnings are well located and complement and integrate with the building design | | N/A | |
| **4T-2** Signage responds to the context and desired streetscape character | | YES | |
| **Energy Efficiency**<br>**4U-1** Development incorporates passive environmental design | | YES | Refer 'Light & Air Strategy' report |
| **4U-2** Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer | | YES | |
| **4U-3** Adequate natural ventilation minimises the need for mechanical ventilation | | YES | Refer 'Light & Air Strategy' report |
| **Water Management and Conservation**<br>**4V-1** Potable water use is minimised | | YES | |
| **4V-2** Urban stormwater is treated on site before being discharged to receiving waters | | YES | |
| **4V-3** Flood management systems are integrated into site design | | YES | |
| **Waste Management**<br>**4W-1** Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents | | YES | |
| **4W-2** Domestic waste is minimised by providing safe and convenient source separation and recycling | | YES | |
| **Building Maintenance**<br>**4X-1** Building design detail provides protection from weathering | | N/A | Adaptive reuse |
| **4X-2** Systems and access enable ease of maintenance | | N/A | Adaptive reuse |
| **4X-3** Material selection reduces ongoing maintenance costs | | YES | |