

DESIGN VERIFICATION STATEMENT

| Shop top housing development

2-8 Rickard road North Narrabeen |

Section 4.55 amendment to development application N0267/16

Revision: 01 26.07.23

DV

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ARCHITECTS

Principle 1: Context and neighborhood 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.

The site is zoned B2 – Local Centre under Pittwater Council Local Environmental Plan 2014.



The site is a unique corner block at the entrance to Narrabeen on Rickard Road and adjoins the rear of the retail strip along Pittwater Road.

It is formed by the amalgamation of four blocks creating a land area of 1925sqm with a street frontage of 46.92metres to Rickard Road and 39.15metres to Minarto Lane. The site's main frontages are to the south and east.

This area of Narrabeen is in transition from original fibro cottages and dilapidated industrial buildings to an area perfectly suited to mixed residential developments and shop to housing which is the part of the Objectives of zoning under the L.E.P. (see attachment 1 for Pittwater Council L.E.P. 2014 - Zone B2 Land Use Table).

The site is ideally positioned for the proposed development; adjoining the retail strip which fronts Pittwater Road and centrally positioned within the Local Centre zone.

The site is also located in an area that can be seen as the gateway to the Upper Peninsula:

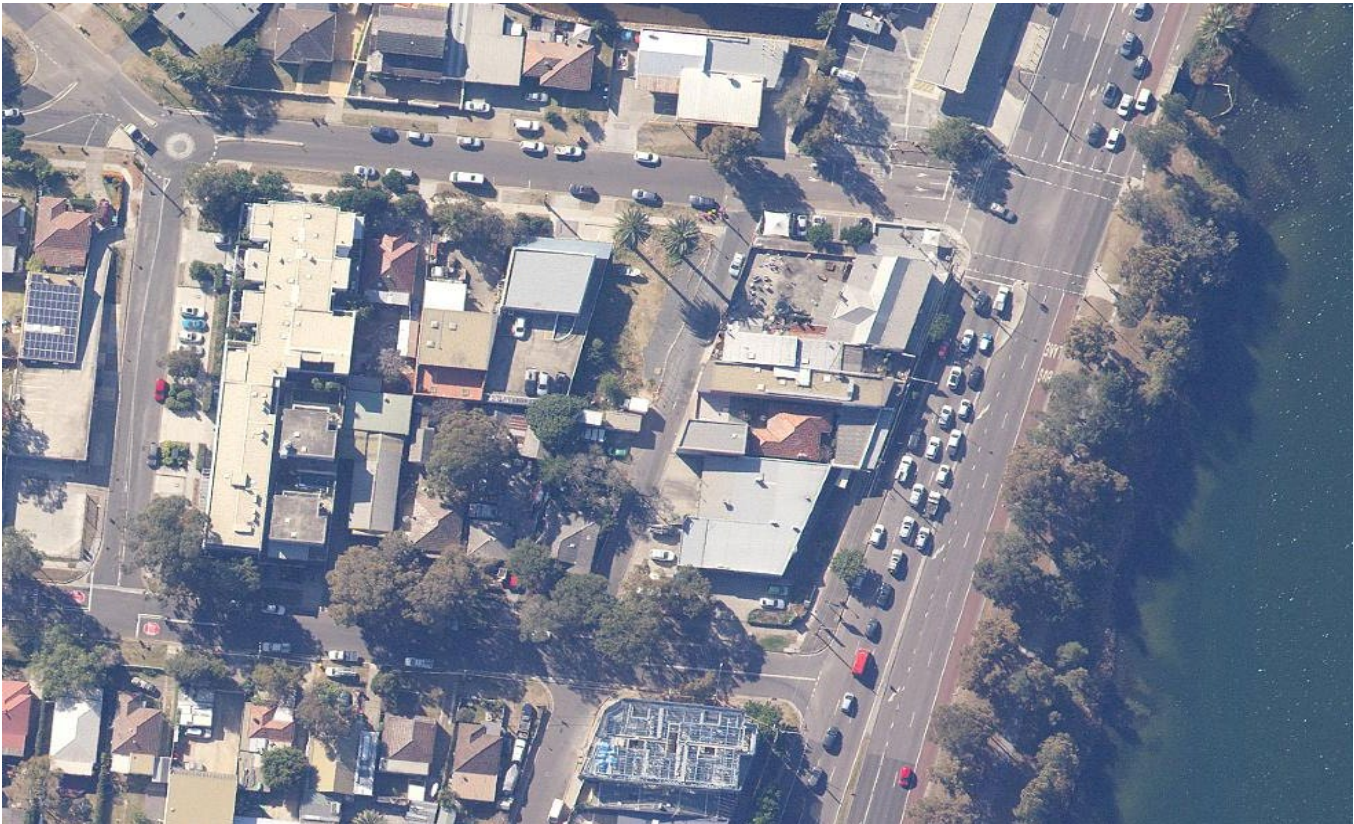
- Close to the recreational area of Narrabeen Lakes, Narrabeen beach and is also:
- Well serviced by public transport via both the Wakehurst Parkway and Lower North Shore towards the City.

The site will further benefit with the upgrade of the Wakehurst Parkway which is due with the construction of the new Northern Beaches Hospital.

The proposal is the “pioneer development” for the locality in that it is the first in this particular Local Centre Zoning to make use of Council’s controls for the zoning. It consists of a mixed use development comprising of ground floor retail spaces, two levels of residential units above. The design has been orientated such that the proposed atrium brings natural direct sunlight into the centre of the proposed development.

The development has been designed taking into account the site’s environmental opportunities and constraints ensuring that the building’s use does not take away from the existing land use in the immediate area. The proposal has been orientated to maximize solar access and cross ventilation and does not impact to its surrounding neighbours.

In reflecting and enhancing Pittwater Council's intent to revitalise the retail strip in B2 Local Centre Zoned areas and the desired future characteristics, the development responds appropriately to the adjoining buildings, surrounding area, desired future character of the locality which is under transition.



View looking south on Pittwater Road, past Rickard road towards Wakehurst Parkway intersection.



View looking north on Pittwater Road



Commercial/retail building on the corner of Rickard Rd & Minatro lane



View north up Minatro lane



Property adjoining western boundary



Poor façade articulation to 12 Rickard st onto Verona st – almost adjacent to the proposed building form.



Commercial property opposite southern end Minarto Lane



Commercial property at southern end Minarto Lane

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.

The site is located within Council's B2 – Local Centre zoning which allows for residential usage above street level retail/commercial premises up to a total height of 8.0m (above the Flood Planning Level) and setbacks and building envelopes in accordance with Council's D.C.P. requirements. These are addressed in the Statement of Environmental Effects attached with this Development Application.

The built form and scale of the proposed development reflects the intended development scale for the area and is a response to the orientation and the environmental constraints of the property.

The proposed building will present itself in 3 horizontal parts:

1. Podium plinth – required due to the flood hazard nature of the locality,
2. Retail commercial level, and
3. Residential levels.

This approach is consistent with the future character of the area as defined by Council's L.E.P. control requirements.

Further, the proposal has setback the building 3.5metres from Minarto Lane to create a landscaped pedestrian verge at street level which is currently lacking. This setback will contain deep soil planting which wraps around the south east corner of the site (being the prominent corner of Rickard Road) reducing the corner bulk of the building and allowing the user to be visually led to either entrance on Richard Road or Minarto Lane.

As the pioneer development in the locality it may initially appear as a dominant element. However it's scale and massing is consistent with the character of residential development in the Pittwater locality. We believe the development will also have a positive impact by contributing to the public domain and "activate" Minarto Lane such that it promotes similar future development.

The building form incorporates distinct entry features on both the Rickard Rd and Minarto Lane facades which draw people to the open core of the building. Stepped terraces at the northern end of the Minarto Lane façade, softens the podium base, inviting users into the building and activating what will become a vibrant café space.

The massing of the building is well considered, pulling back the south east corner of the building at ground level, softening the connection of the building to the ground with layered landscaping and deep soil planting.

Whilst the overall height of the building marginally exceeds the permissible height as defined the impact and scale of the development is consistent with that intended for the local centre zoning and the required heights for compliant design practitioners. The proposed scale and height of the development is seen as a positive response, while respecting and minimizing environmental impacts to its immediate existing and future neighbouring developments. Shadows cast fall within the anticipated shadows within the urban environment.

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 site is within the business zone B2 Local Centre which promotes this proposed type of development.

The density of the proposal is appropriate, with the residential units enjoying superior internal amenity with floor areas significantly greater than control requirements. The density has been achieved with appropriate scaling and the distribution of bulk of the building. Architecturally the design of the building has been articulated to reduce its appearance whilst contributing to the streetscape and surrounds, through improved public domain areas.

In order to provide a variety of housing types that will offer a diversity of accommodation, the residential portion of the building has been designed as a mix of accessible, one-, two- and three-bedroom units. These are distributed as follows:

Units range in size between:

- 1 bedroom 51sqm – 64sqm
- 2 bedroom 73sqm – 88sqm
- 3 bedroom 130sqm

Further the proposed development also provides 4 adaptable units (approx. 20% of total units). The adaptable units have been designed in accordance with the requirements of AS 1428 series and Building Code of Australia.

Additionally, the contribution to the public domain in “activating” Minarto Lane also reduces the density of the proposal.

The density achieved is considered to be appropriate for this business zone under transition. The site is ideally located taking into account the controls, environmental constraints and growing urban context in which, it sits.

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.

The proposal utilizes passive solar design principles for climate control, which reduces the consumption of energy. This is demonstrated by the proposed development achieving compliance with State Environmental Planning Policy (Building Sustainability Index: BASIX).

The BASIX assessment has been carried out by Efficient Living and a certificate forms part of this application. The commitments relating to water, energy and thermal comfort to the common areas and dwellings are noted and confirms that the proposal complies with all relevant standards.

Energy efficiency principles have been integrated throughout the design. Where possible residential floor layouts have been designed such that, wherever possible, living areas and private open spaces are orientated to towards North with one balcony per unit has been allowed to be accessible from the principal living area of each, with operable doors enabling occupants to create an indoor / outdoor connection.

Our primary design statistics are as follows:

- Living Rooms - 2 hours direct Natural Sunlight between 9am – 3pm Mid winter Apartments 16 apartments (80%)
- Private Open Space - 2 hours direct Natural Sunlight between 9am – 3pm Mid winter Apartments 16 apartments (80%)
- No direct Natural Sunlight between 9am – 3pm Mid Winter 1 Apartments (5%)
- Number of apartment naturally cross ventilated 16 Apartments (80%)
- Further detail is provided in attachment 2 – Development Statistics

All habitable rooms have operable windows which comply with Australian and N.C.C. (B.C.A.) requirements and are significantly greater than the Apartment Design Guide control requirements.

Units are of generous size to allow not only internal amenity but enable the introduction of generous window and door openings for natural light and ventilation. Refer to Principal 3 above and Attachment 2 – Development Statistics - for further information on apartment sizes.

The building façades have been deliberately articulated to maximize natural light whilst providing protection when required.

North facing windows and doors are typically screened with pergola structures or horizontal awnings, eastern and western corner terraces are roofed to allow the fixing of vertical screens.

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.

The proposal utilizes landscaping as a means of enhancing the aesthetic presentation from the street and surrounding buildings, and the amenity of the occupants of the building. The development has been designed to be extensively landscaped at ground level along Minarto Lane and Rickard Road and particularly at the intersection of these two roads.

As the pioneer development in the locality., the contribution to the public domain along Minarto Lane, if replicated in future adjacent developments, will not only improve the amenity of the lane, but significantly improve and enhance the overall character of the locality.

Due to flood planning requirements the main Podium level must be raised over two metres above the adjacent natural ground level. The proposed perimeter deep landscaping will soften the massing of the building at ground level allowing for mature trees to develop.

Privately, balcony areas throughout the building provide ample opportunity for potted planting.

Wide planters are also used extensively on the western and northern boundaries to provide a 'green' screen and privacy to the occupants from neighboring buildings. This approach is expected to be replicated on future adjacent developments in this Local centre zoning as it is inferred from planning control requirements and flood planning considerations.

These planters, at the first floor level, are able to achieve a soil depth of up to 1.0 metre and allow substantial planting to benefit the second level units also.

Furthermore, the public atrium has been designed with a large raised planter to support a substantial tree, linking the levels as you rise through the building. The atrium is also framed by a 'green wall' which screens the public amenities. This landscape element ties the building vertically.

Generally the landscape design aims to:

- Provide visual amenity for residents
- Soften built form when viewed from public domain areas
- Provide privacy screening to units from public domain
- Provide species of low – medium water demands on roof top common area

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 wellbeing.

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.

The proposal has been designed and orientated to maximize the amenity for the occupants as well contribute to the public amenity. Being the pioneer development site in this locality, the building has been designed to allow it to contribute to the public amenity of the area by “activating” Minarto Lane with the introduction of a public “verge” designated for pedestrian traffic and deep soil planting. We believe that the “activation” of Minarto Lane will greatly contribute the public amenity of the entire locality.

The building provides an elevated public terrace and an open atrium from the retail podium spaces offering a place in the sun for the local community to gather.

The internal amenity for both the retail and residential users is achieved by the introduction of a large central atrium which is open to the sky flooding the central portion of the building with light. This atrium also provides the opportunity for the apartments to maximise direct natural sunlight and cross ventilation.

The apartments incorporate open plan living, where the primary living areas of the dwellings open up and extend to private open spaces. The proposal has been designed considering the constraints and creates the best possible outcome for the site, whilst minimizing impact to its neighbours. The apartments are generously sized to not only maximise amenity, but to facilitate future flexibility for reconfiguration or adaptability. There is a great variety of unit layouts and sizes to suit a wide cross section of the community.

Our primary design statistics are as follows:

- i. Minimum Height of Habitable Rooms 2.7m
- ii. Minimum Height of Non-Habitable Rooms 2.4m
- iii. Minimum Internal Area of all 1 Bedroom apartments 51sqm
- iv. Minimum Internal Area of all 2 bedroom apartments 73sqm
- v. Minimum Internal Area of all 3 bedroom apartments 130sqm

Further detail is provided in attachment 2 – Development Statistics (Solar Access and Cross Ventilation requirements, refer attachment 2, 3 & 4.)

Apartments are also provided with basement storage, car parking and waste facilities in a basement with direct access via a lift to the residential levels.

The acoustic privacy of residents is ensured through a combination of partially enclosing balconies facing adjacent apartments. The proposal reduces the transmission of noise from unit to unit and between floors by use of appropriate floor and ceiling insulation, together with the floor impact rubber underlays coupled with simple repeated design layouts between floors and placement of wet areas all reducing the acoustic impacts.

In summary the considered areas incorporated:

- Well defined residential entry with ease of disabled access from the street including;
- Comfortable entry pathways and lobby for ease of mobility;
- Lift access to all levels;
- Unit and room sizes appropriate for intended use;
- Comfortable balcony and terrace proportions;
- Landscaped public and private areas;
- Orientation of units and living spaces to ensure visual; and acoustic privacy; and
- Maximum storage requirements within the apartments and provide additional storage within the basement area for each unit in secured lockups.

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.

The proposed development with its public domain improvements, along with orientation of principal living areas and private open space towards both Minarto Lane and Rickard Road will encourage natural surveillance of the subject site and its immediate surrounds.

The development provides secure parking for residents, as well two entry points clearly visible from the street. All apartments are also accessed via a lift which is for the residential levels only. A keyed security system on the lift to secure separate floors means there is a high degree of security.

The security of residents will be further addressed through security gates to the basement car park entry (the residential level). The residential entry points will be well lit providing a safe well-viewed and naturally surveyed environment

During business hours, the retail areas provide an excellent means of deterrence from criminal activity.

Obscured areas and alcoves have been avoided in the design of the public domain spaces, and the central atrium space is wide and brightly lit, with units opening into the atrium space to facilitate safety and passive overlooking.

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 residents.

The proposed development provides the additional residential accommodation desired by Council within this new mixed use Local Centre zoning, which is also located near public infrastructure. It does this in a manner that is sympathetic to its neighbours, contributory to its surrounds, and is attractive to prospective occupants and purchasers or the properties.

Being a pioneer development in this local Centre it will also be considered a standard for future development in the Locality. The mix of the development provides for the needs of a wide variety of future occupants with many income levels. Accessible, one, two and three bedroom apartments are provided of varying physical size and hence cost. It cannot be understated the importance of accessible apartments in close proximity to local amenity and transport.

As discussed above the proposal also activates ground level street frontages which will contribute to the desired social mixture of facilities in the local centre. It is the desired outcome for this development to re- invigorate Minarto Lane with future development also contributing to a pedestrian friendly Local Centre.

As noted in principle 3 above we have the following mix of apartments:

Level 1:

- 3 x 1 Bedroom Units
- 6 x 2 Bedroom Units
- 1 x 3 Bedroom Units

Level 2:

- 3 x 1 Bedroom Units
- 6 x 2 Bedroom Units
- 1 x 3 Bedroom Units

Some of the apartments also provide a designated study area to facilitate lifestyle flexibility, and recognise the extended family.

The mix and sizes of apartments represented by the proposed development is consistent with the anticipated growing population and unit affordability in the area.

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.

The overall development has a high quality aesthetic. The articulated facades defined by the corner setback, corner balconies and strong vertical masonry elements to both Rickard Rd And Minarto Lane create a contemporary yet human scaled building. There are defined entry points on both street frontages to draw people into the building core which is an open and light atrium space.

Like all future development within the local centre, buildings will need to address flood plain issues affecting the entire locality. This proposal addresses it by significantly “planting out” street front setbacks and activating them with public terraces from the “podium” level retail spaces required to be provided.

The proposal is the pioneer development in this evolving future mixed use character of the Local Centre.

The architectural style is contemporary and is consistent with the expectations of the market and is sympathetic to its surroundings.

The building form is articulated by considered massing and layered landscaping which dominates the corner and Minarto Lane façade. Small scale architectural elements and a rich palette of materials and colour provide a user friendly pedestrian environment. The differing building elements break up the mass of the proposed development and provide an articulated façade, which overlaps and connects each part of the façade. The elements visually connect and balance each part through use of colour; materials and overlapping elements

It is considered that the diversity of apartments along with appropriate scale, forms, landscaping and setbacks appropriately respond to the desired future character of the locality and its environmental limitations.

Pittwater Local Environmental Plan 2014

Current version for 1 April 2016 to date (accessed 5 May 2016 at 12:03)

Land Use Table > Zone B2



Zone B2 Local Centre

1 Objectives of zone

- To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.
- To encourage employment opportunities in accessible locations.
- To maximise public transport patronage and encourage walking and cycling.
- To provide healthy, attractive, vibrant and safe local centres.
- To strengthen the role of centres as places of employment.
- To provide an active day and evening economy.
- To provide for residential uses above street level where they are compatible with the characteristics and uses of the site and its surroundings.

2 Permitted without consent

Home businesses; Home occupations

3 Permitted with consent

Amusement centres; Boarding houses; Car parks; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Environmental protection works; Function centres; Home-based child care; Home industries; Horticulture; Information and education facilities; Medical centres; Passenger transport facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Service stations; Sex services premises; Shop top housing; Signage; Tourist and visitor accommodation; Veterinary hospitals

4 Prohibited

Any development not specified in item 2 or 3

ATTACHMENT 2

Development Statistics

Total site area 1952.5

Total GFA 2363sqm

Residential areas – Total GFA =1873.4sqm

Ground commercial – Total GFA =489.6sqm

DENSITY

Residential Density - No Control

All apartment exceed the minimum area requirements

Apartment Level 01	Area	Apartment level 02	Area(sqm)
1(1 Bedroom)	51	11(1 Bedroom)	51
2(1 Bedroom)	64	12(1 Bedroom)	64
3(3 Bedroom)	130	13(3 Bedroom)	130
4(2 Bedroom)	86	14(2 Bedroom)	86
5(2 Bedroom)	88	15(2 Bedroom)	88
6(2 Bedroom)	82	16(2 Bedroom)	82
7(1 Bedroom)	61	17(1 Bedroom)	61
8 (2 Bedroom)	108	18 (2 Bedroom)	108
9 (2 Bedroom)	79	19(2 Bedroom)	79
10 (2 Bedroom)	73	20(2 Bedroom)	73

Commercial Area

Required GLA 25% total GFA

Total GFA required 2363sqm (590sqm)

Proposed GFA: 480.9sqm

Proposed GLA: 440.9sqm

Commercial Space	Area
A	103.80sqm
B	92sqm
C	245.10sqm

40sqm commercial wet area

APARTMENT AMENITY

Solar & Daylight Access

Living rooms and private open space of at least 70% of the apartments are to receive a minimum of 2hrs between 9.00am and 3.00pm on the 21st June

14 apartments are required to comply. Refer Appendix 3 for apartment diagrams.

The development is compliant.

Apartment Level 01	Solar Access	Apartment Level 02	Solar Access
1	Non-compliant	11	Non-compliant
2	Non-compliant	12	Compliant
3	Compliant	13	Compliant
4	Compliant	14	Compliant
5	Compliant	15	Compliant
6	Compliant	16	Compliant
7	Non-compliant	17	Compliant
8	Compliant	18	Compliant
9	Compliant	19	Compliant
10	Compliant	20	Compliant

APARTMENT AMENITY

Natural Ventilation

60% Apartments are naturally cross ventilated.

12 apartments are required to comply. Refer Appendix 4 for apartment diagrams

Apartment Level 01	Solar Access	Apartment Level 02	Solar Access
1	Compliant	11	Compliant
2	Non-compliant	12	Non-compliant
3	Compliant	13	Compliant
4	Compliant	14	Compliant
5	Compliant	15	Compliant
6	Compliant	16	Compliant
7	Non-compliant	17	Non-compliant
8	Compliant	18	Compliant
9	Compliant	19	Compliant
10	Compliant	20	Compliant

Ceiling Heights

All apartments

- Minimum Height of Habitable Rooms 2.7m
- Minimum Height of Non-Habitable Rooms 2.4m
- Commercial Space: 3.5m floor to floor (allowing 500mm for services)

Apartment Size & layout

Minimum sizes

- 1 Bedroom 50sqm
- 2 Bedroom 70sqm
- 3 Bedroom 90sqm
- Master bedroom – min area 10sqm All bedrooms comply
- Bedrooms minimum dimension 3.0m All bedrooms comply

Balcony Areas

- 1 & 2 Bedroom a minimum depth of 2 metres is appropriate (min. area 1 bed 8sqm)(min. area 2 bed 10sqm)
- 3 Bedroom a minimum depth of 2.4 metres. (minimum area 12sqm)

Apartment level 01	Bedroom	Sqm area	Min Dim (m)	Apartment level 02	Bedroom	Sqm area	Min Dim (m)
1(1 Bedroom)	1	17	2.05	11(1 Bedroom)	1	17	2.05
2(1 Bedroom)	-	9	3.2	12(1 Bedroom)	-	9	3.2
3(3 Bedroom)	3	16.5	3.2	13(3 Bedroom)	3	16.5	3.2
4(2 Bedroom)	2	11	3.2	14(2 Bedroom)	2	11	3.2
5(2 Bedroom)	-	10.5	2.7	15(2 Bedroom)	-	10.5	2.7
6(2 Bedroom)	-	10	2.6	16(2 Bedroom)	-	10	2.6
7(1 Bedroom)	-	10	2.4	17(1 Bedroom)	-	10	2.4
8 (2 Bedroom)	2	13.4	2.9	18 (2 Bedroom)	2	13.4	2.9
9 (2 Bedroom)	2	10.5	2.05	19(2 Bedroom)	2	10.5	2.05
10 (2 Bedroom)	2	10.5	2.05	20(2 Bedroom)	2	10.5	2.05

Common Circulation

Common areas and circulation corridors are all well articulated to achieve good amenity and privacy.

LANDSCAPE AREA

Required: 20% Site Area or 35sqm/dwelling
390.70 or (35x20) 700sqm

Proposed

Deep Soil	229.5sqm
Ground Floor Planters	1.6sqm
Atrium & vertical garden	53.73sqm
1 st Floor Planters	213.1sqm + turf 52.5sqm

Total 550.4qm
Complies with 20% site area control

SETBACKS

Front Building Line

Required – Minarto Lane nominated	3.5
Proposed	3.5m Complies

2nd Street Setback

Required – Rickard Road	3.0
Proposed	3.0m Complies

Side Setbacks (North) & West

Required	Nil
Proposed	1.1 (unit 08 west side to boundary) – 3.0 2.0 – 3.0 North.

CAR PARKING - Complies

Residential

6 x 1 bed	6
12 x 2 bed	24
2 x 3 bed	4
Total	34

Visitor (20) 7 (1 per 3 rounded up)

Commercial 11

Total 52 + washbay

Proposed 55

Bicycles

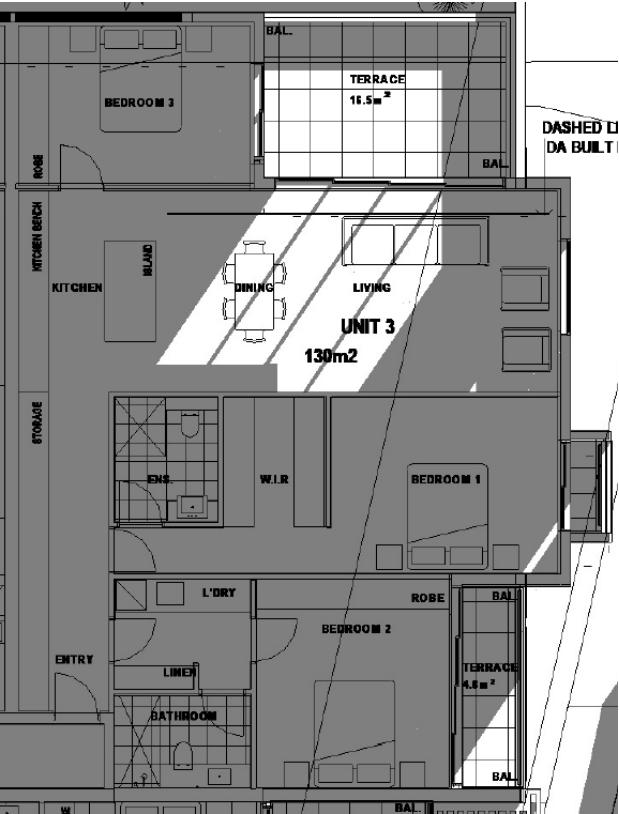
Residential	7
Commercial	4

ATTACHMENT 3 - Solar & Daylight Access Analysis

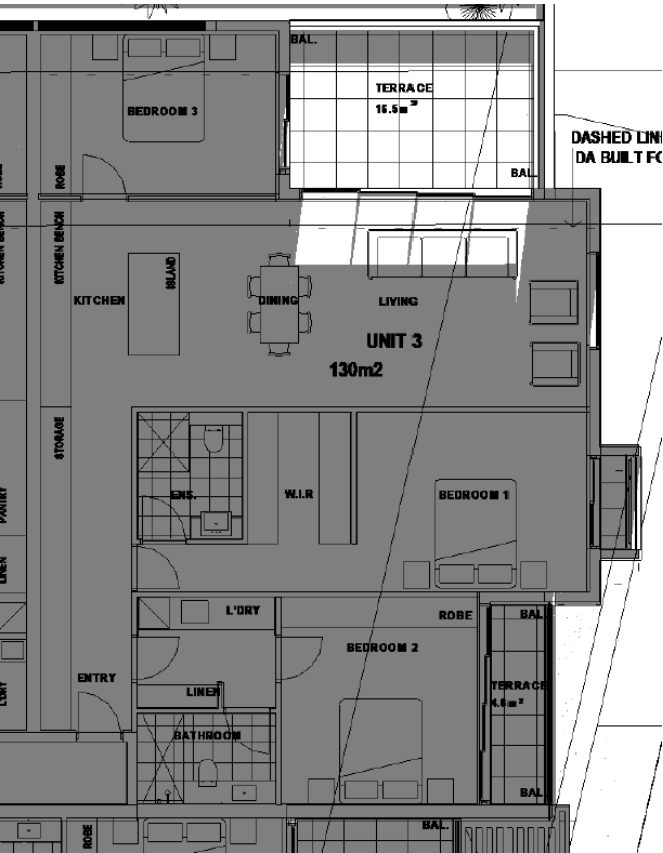
		9.00am	10.00am	11.00am	12.00am	1.00pm	2.00pm	3.00pm	HOURS	COMPLIES
LEVEL 1:										
UNIT 01	Living:								0hr	
	P.O.S:								0hr	
UNIT 02	Living:	X	X						1hr	
	P.O.S:								0hr	
UNIT 03	Living:	X	X	X	X	X	X	X	6hr	YES
	P.O.S:	X	X	X	X	X	X	X	6hrs	YES
UNIT 04	Living:	X	X	X	X	X	X	X	6hrs	YES
	P.O.S:	X	X	X	X	X	X	X	6hrs	YES
UNIT 05	Living:	X	X	X	X	X	X	X	6hr	YES
	P.O.S:	X	X	X	X	X	X	X	6hr	YES
UNIT 06	Living:		X	X	X	X	X	X	5hrs	YES
	P.O.S:	X	X	X	X	X	X	X	6hrs	YES
UNIT 07	Living:							X	0.5hr	
	P.O.S:						X		0.5hr	
UNIT 08	Living:			X	X	X	X	X	4hrs	YES
	P.O.S:			X	X	X	X	X	4hr	YES
UNIT 09	Living:	X	X	X	X	X			4hr	YES
	P.O.S:	X	X	X	X	X			4hr	YES
UNIT 10	Living:		X	X	X	X	X		4hr	YES
	P.O.S:		X	X	X	X	X		4hr	YES
LEVEL 2:										
UNIT 11	Living:	X							0.5hr	
	P.O.S:	X	X						1hr	
UNIT 12	Living:	X	X	X	X	X	X		5hr	YES
	P.O.S:	X	X	X	X				3hr	YES
UNIT 13	Living:	X	X	X	X	X	X	X	6hrs	YES
	P.O.S:	X	X	X	X	X	X	X	6hrs	YES
UNIT 14	Living:	X	X	X	X	X	X	X	6hrs	YES
	P.O.S:	X	X	X	X	X	X	X	6hrs	YES
UNIT 15	Living:	X	X	X	X	X	X	X	6hr	YES
	P.O.S:	X	X	X	X	X	X	X	6hrs	YES
UNIT 16	Living:		X	X	X	X	X	X	5hrs	YES
	P.O.S:		X	X	X	X	X	X	6hrs	YES
UNIT 17	Living:				X	X	X	X	3hrs	YES
	P.O.S:		X	X	X	X	X	X	5hrs	YES
UNIT 18	Living:		X	X	X	X	X	X	5hrs	YES
	P.O.S:	X	X	X	X	X	X	X	6hrs	YES
UNIT 19	Living:	X	X	X	X	X	X	X	6hrs	YES
	P.O.S:	X	X	X	X	X	X	X	6hrs	YES
UNIT 20	Living:	X	X	X	X	X	X	X	6hrs	YES
	P.O.S:	X	X	X	X	X	X	X	6hrs	YES
TOTAL No. OF APTS > 2 HOURS (LIVING):										16 - 80%
TOTAL No. OF APTS - 2 HOURS (P.O.S):										16 - 80%

LEVEL 01 RESIDENTIAL

APARTMENT 03



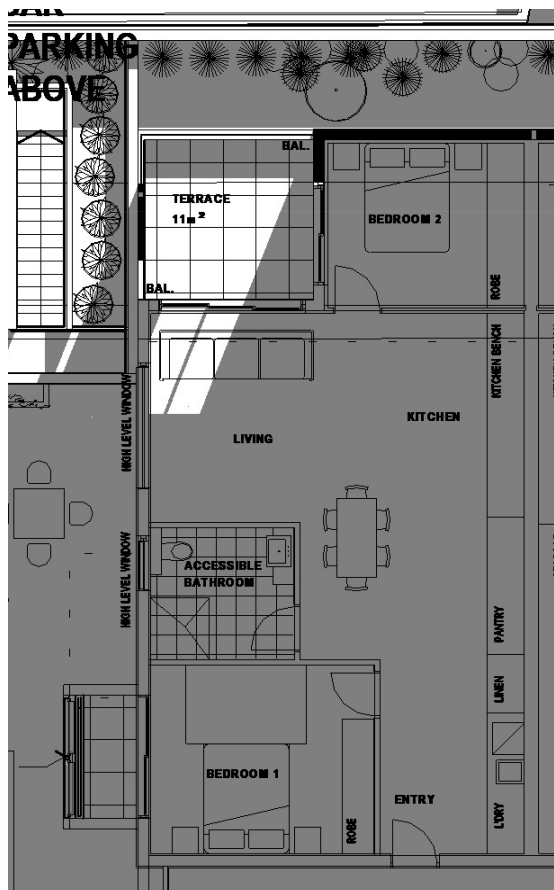
Sun access at 9am on June 21st living and private open space.



Sun access at 11am on June 21st living and private open space.

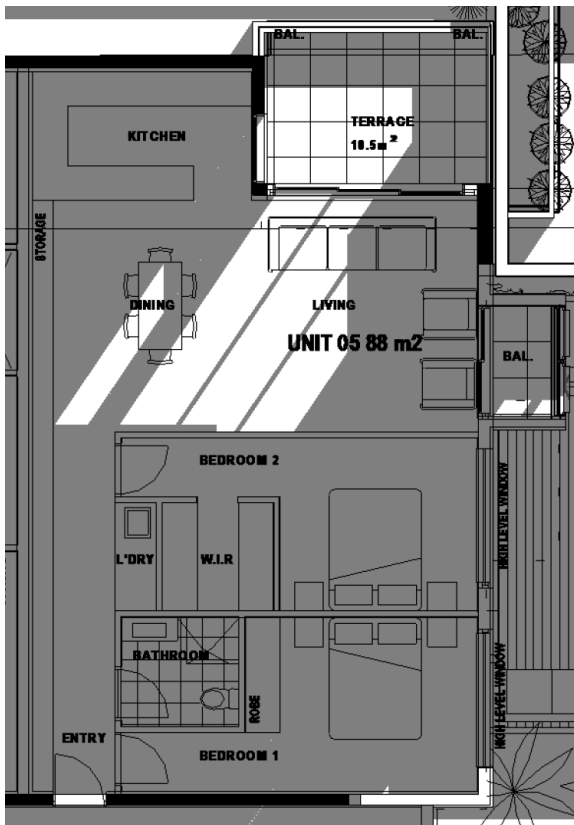
This floor plan shows a two-bedroom apartment. The layout includes:

- Bedroom 1:** Located at the bottom left, featuring a bed, a dresser, and a closet.
- Bedroom 2:** Located at the top right, featuring a bed, a dresser, and a closet.
- Bathroom:** An accessible bathroom is located in the center-left, containing a toilet, sink, and shower area.
- Kitchen:** Located in the center-right, featuring a dining table with four chairs, a kitchen island, and a sink.
- Living Area:** Located in the center, featuring a sofa and a coffee table.
- Entry:** Located at the bottom right, featuring a closet and a door leading to the living area.
- Terrace:** Located at the top left, measuring 11m², and accessible via a balcony (BAL.).
- Balcony:** A balcony (BAL.) is located at the top left, adjacent to the terrace.
- Windows:** High level windows are located on the left side of the apartment.
- Storage:** A linen closet (LINEN) and a pantry are located near the kitchen. A closet (CLO.) is located near the entry.

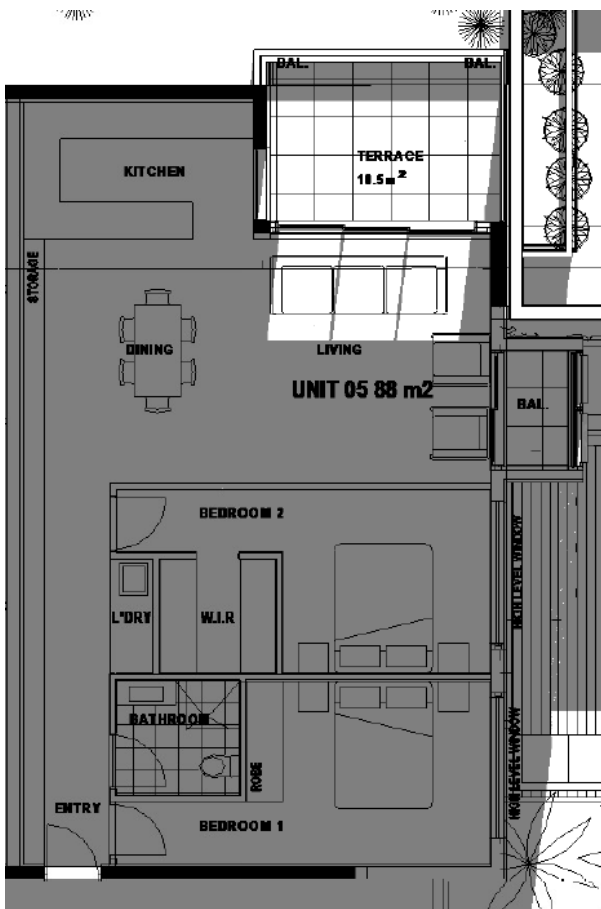
[illegible]

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APARTMENT 05

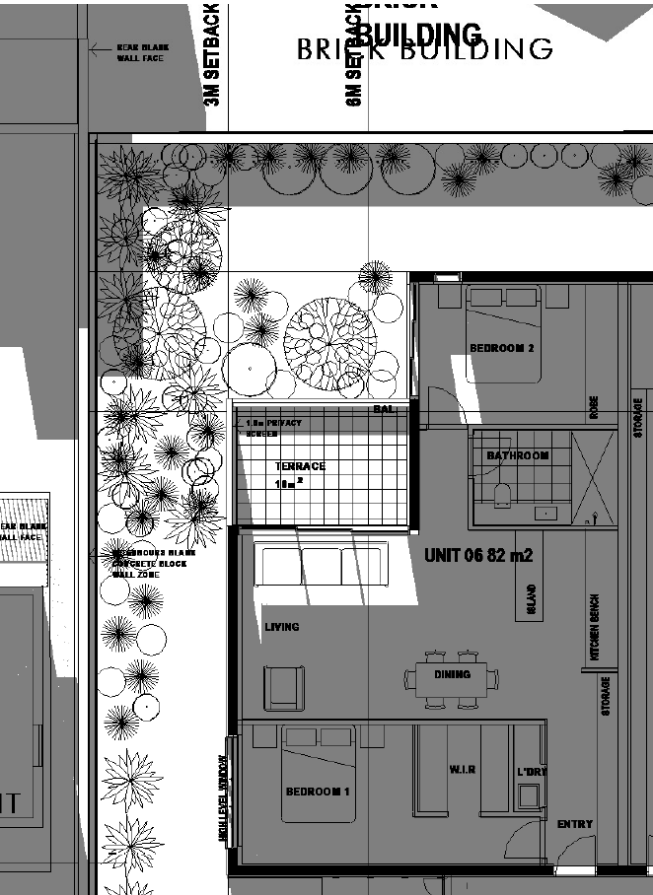


Sun access at 9am on June 21st living and private open space.

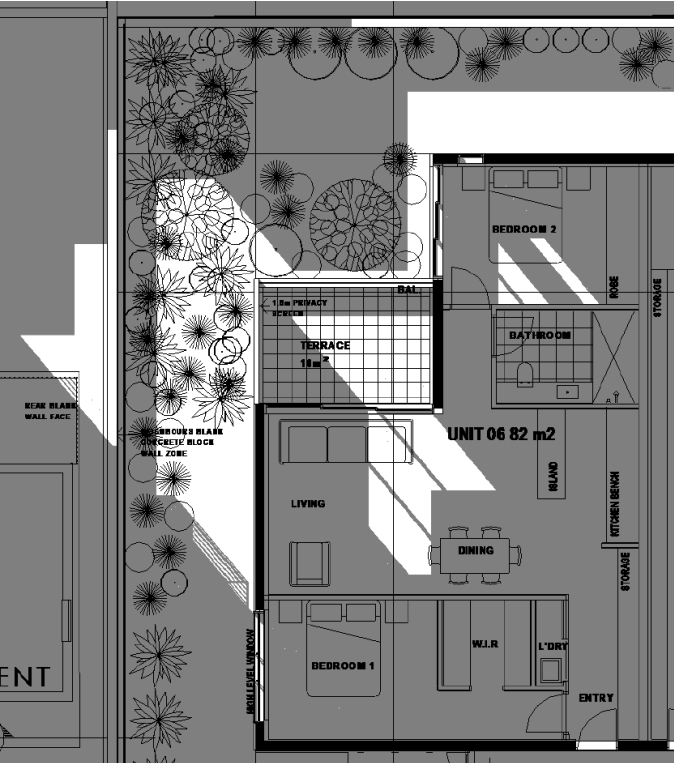


Sun access at 11am on June 21st living and private open space.

APARTMENT 06

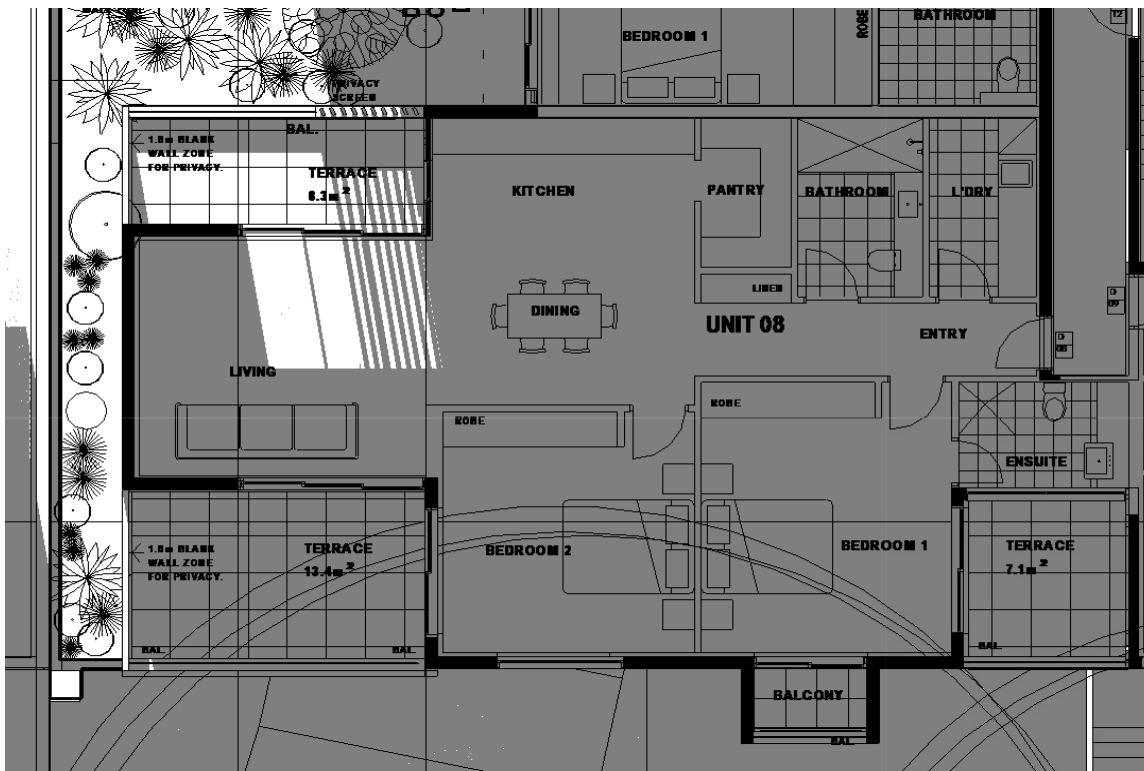


Sun access at 12pm on June 21st living and private open space.

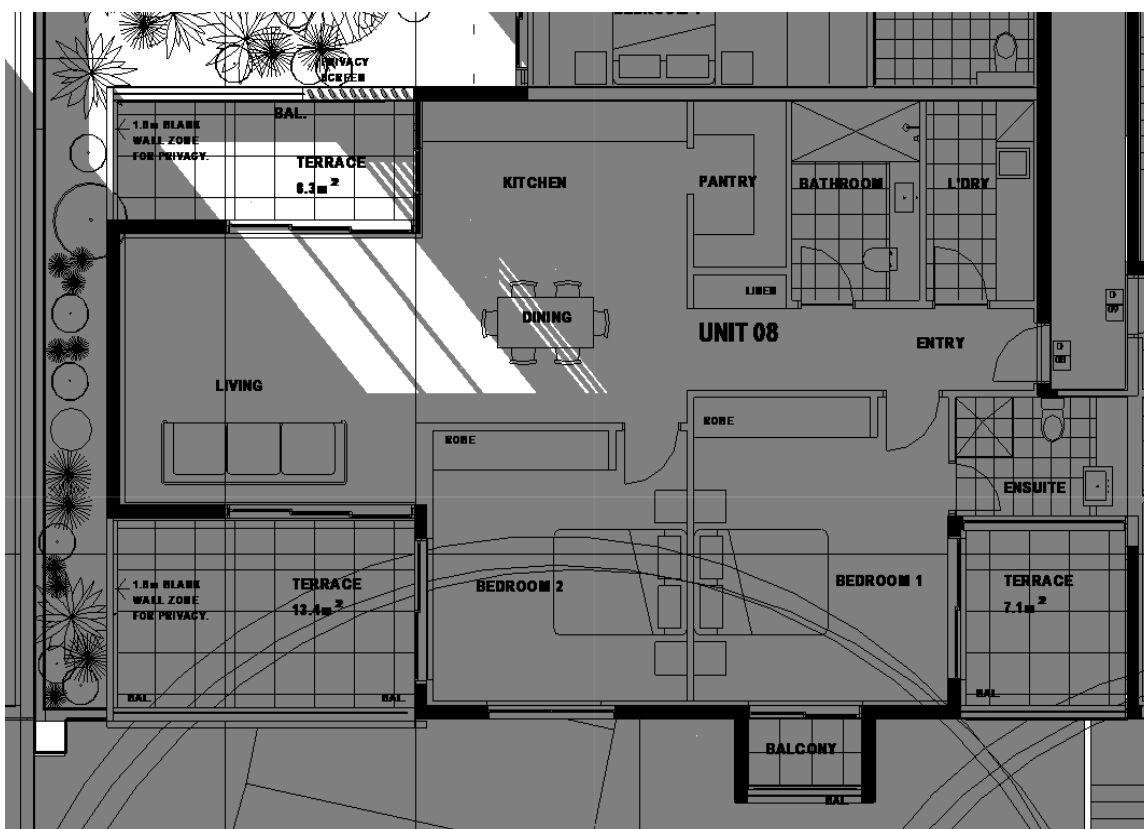


Sun access at 2pm on June 21st living and private open space.

APARTMENT 08

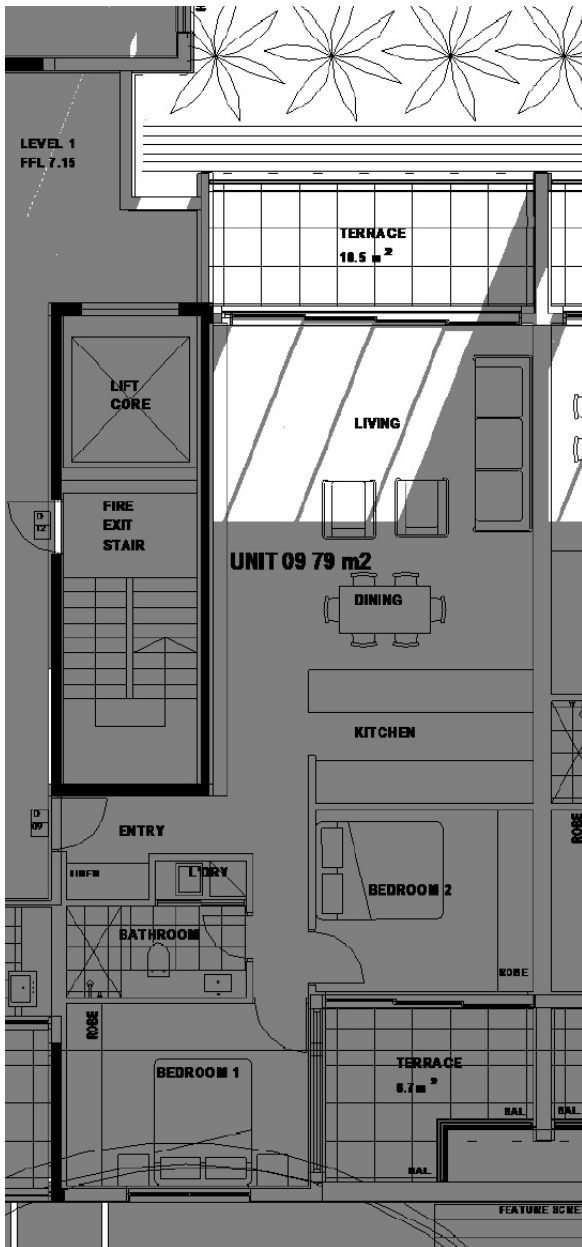


Sun access at 12pm on June 21st living and private open space

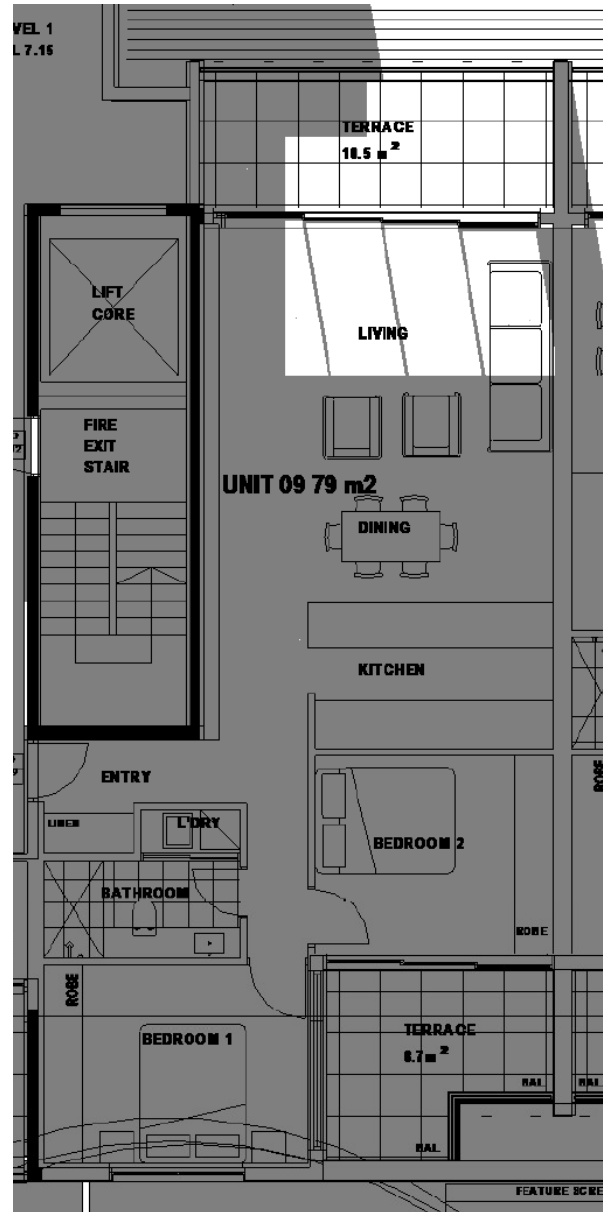


Sun access at 2pm on June 21st living and private open space

APARTMENT 09



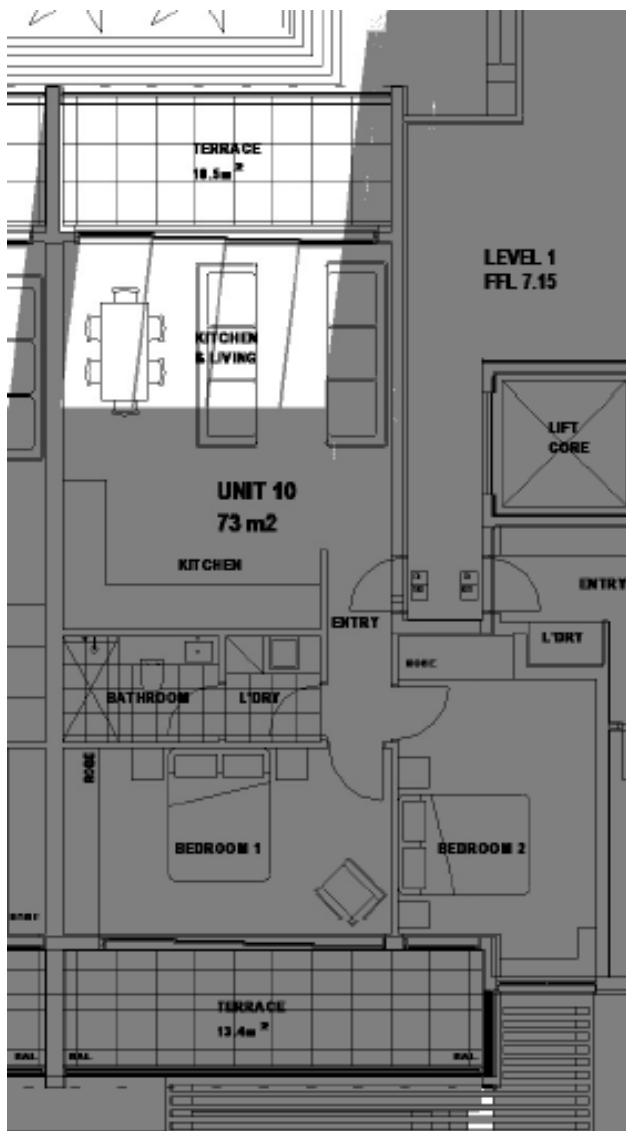
10am



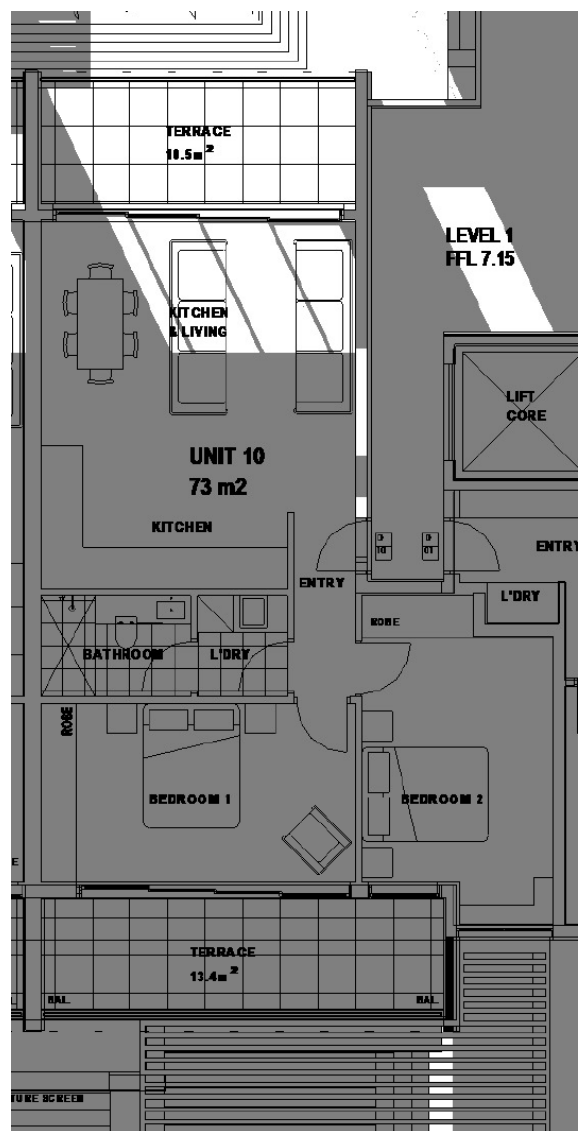
12pm

Sun access at 10am & 12pm on June 21st living and private open space

APARTMENT 10



11am

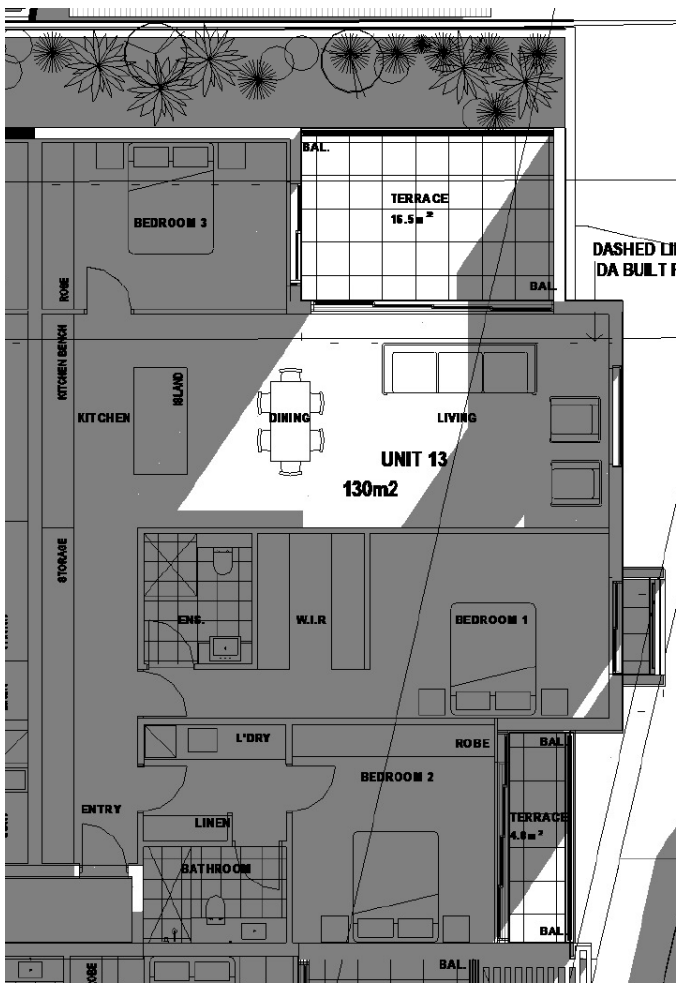


1pm

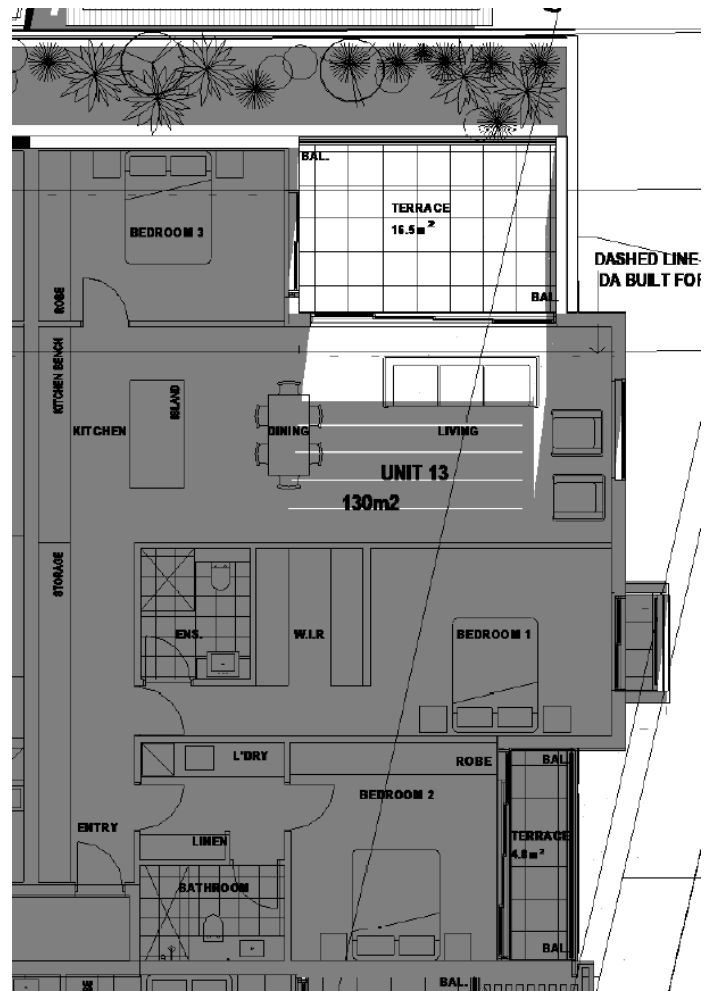
Sun access at 11am & 1pm on June 21st living and private open space

LEVEL 02 RESIDENTIAL

APARTMENT 13



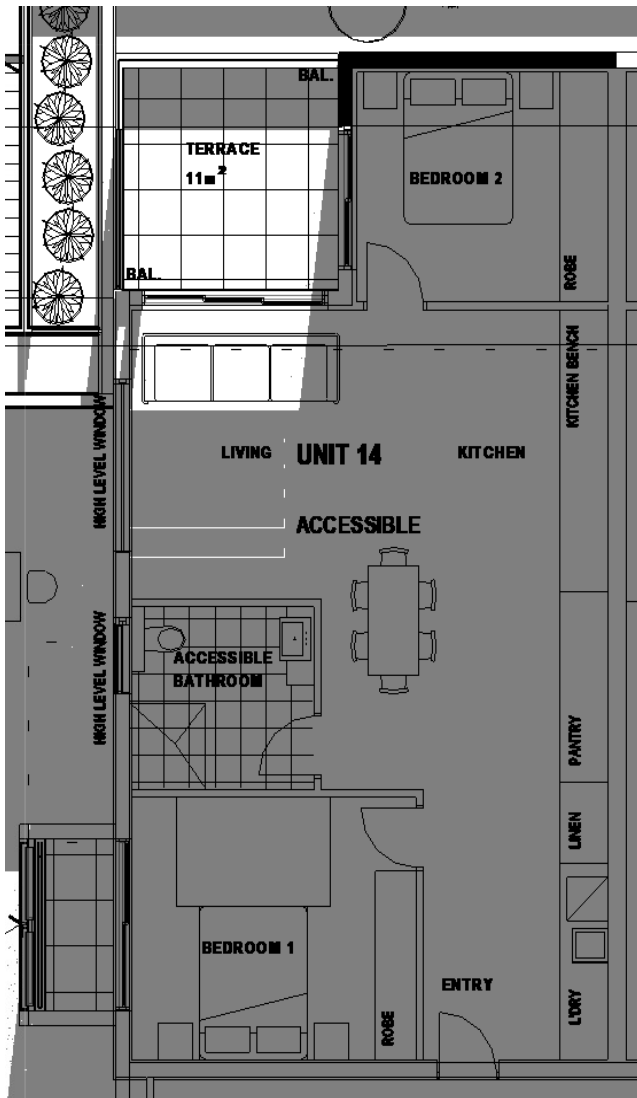
9am



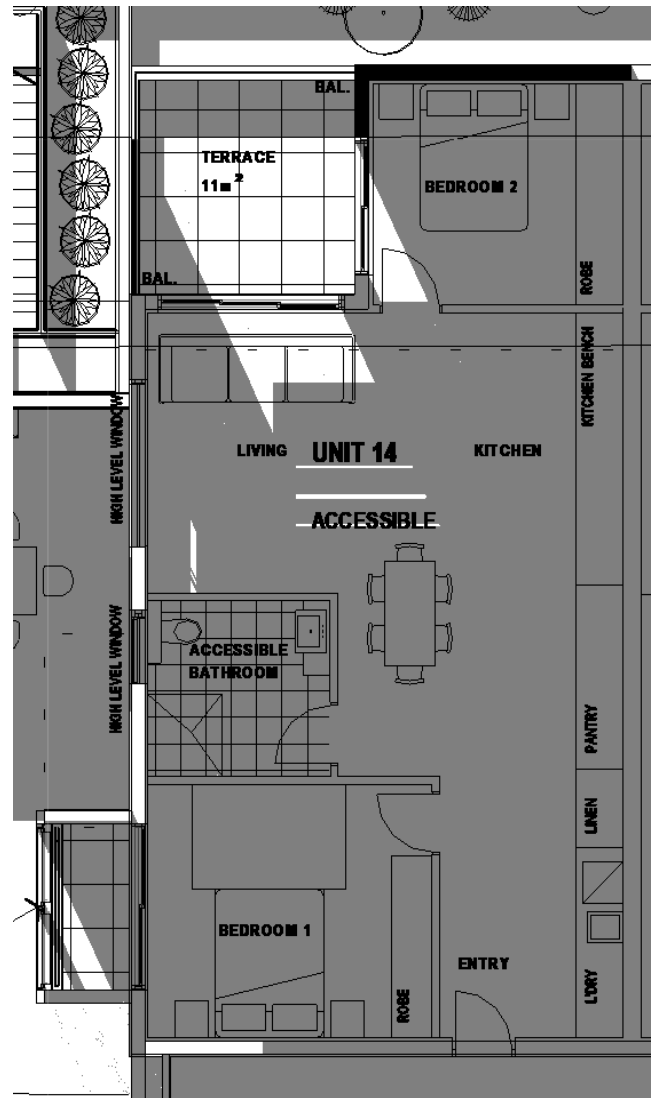
11am

Sun access at 11am & 1pm on June 21st living and private open space

APARTMENT 14



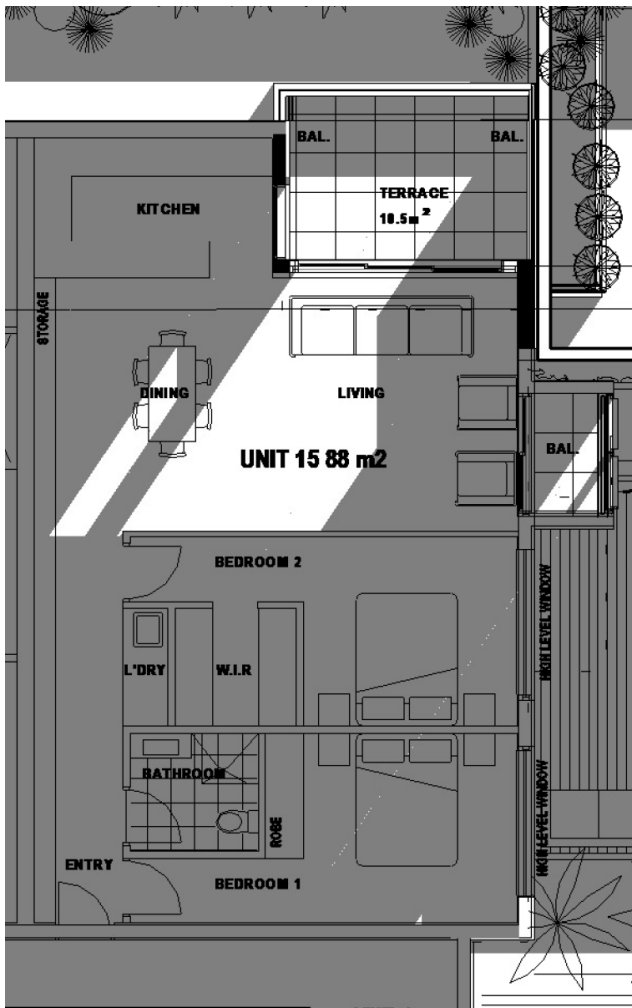
11am



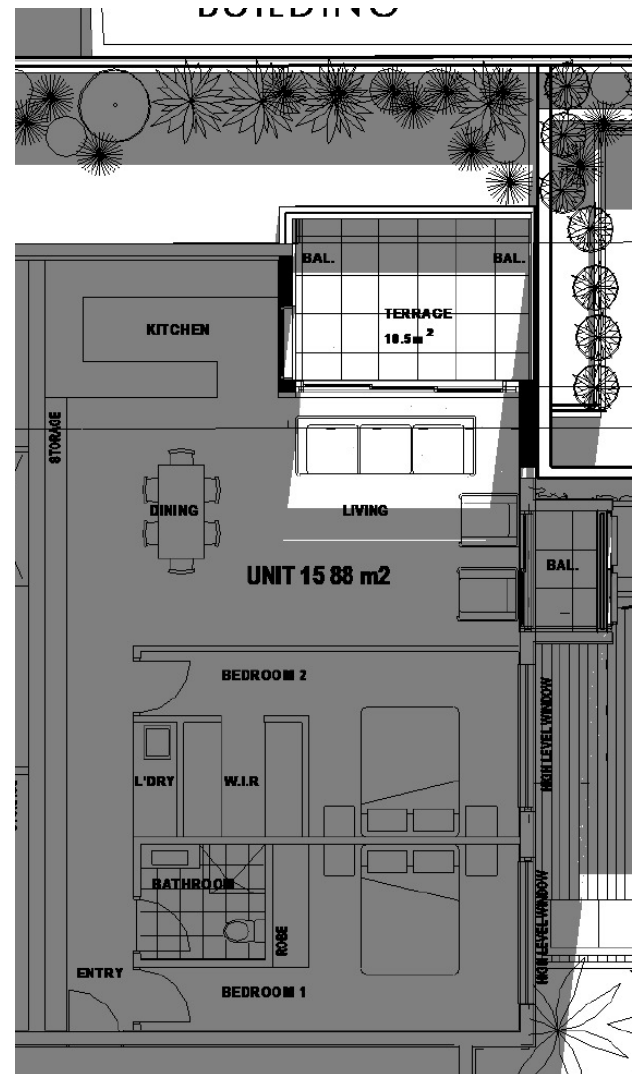
1pm

Sun access at 11am & 1pm on June 21st living and private open space

APARTMENT 15



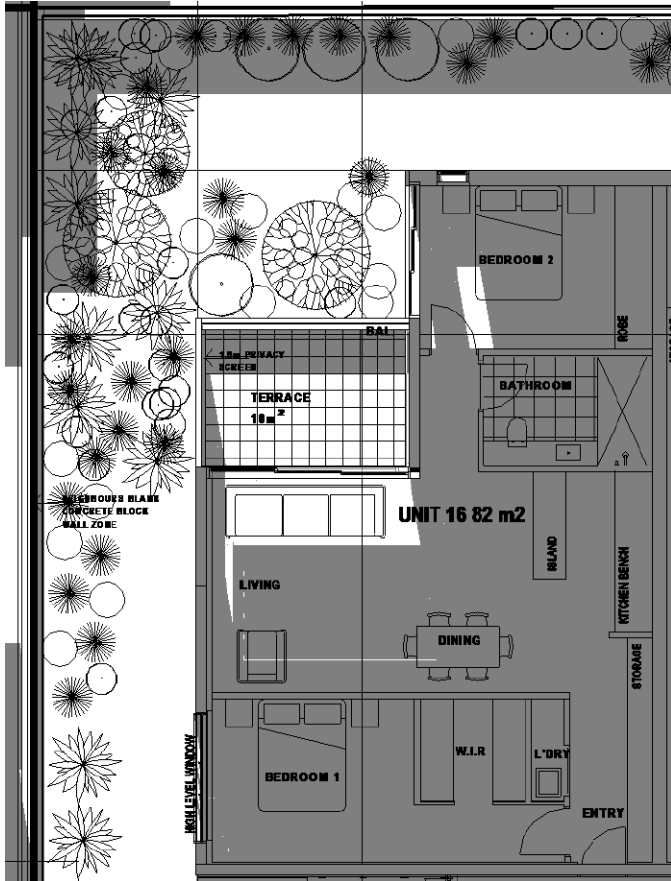
9am



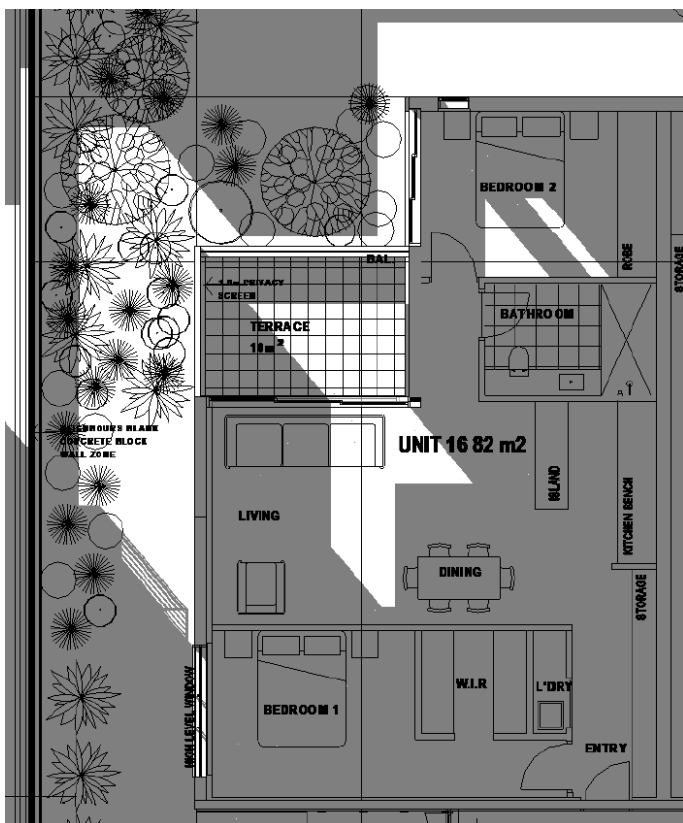
11am

Sun access at 11am & 1pm on June 21st living and private open space

APARTMENT 16

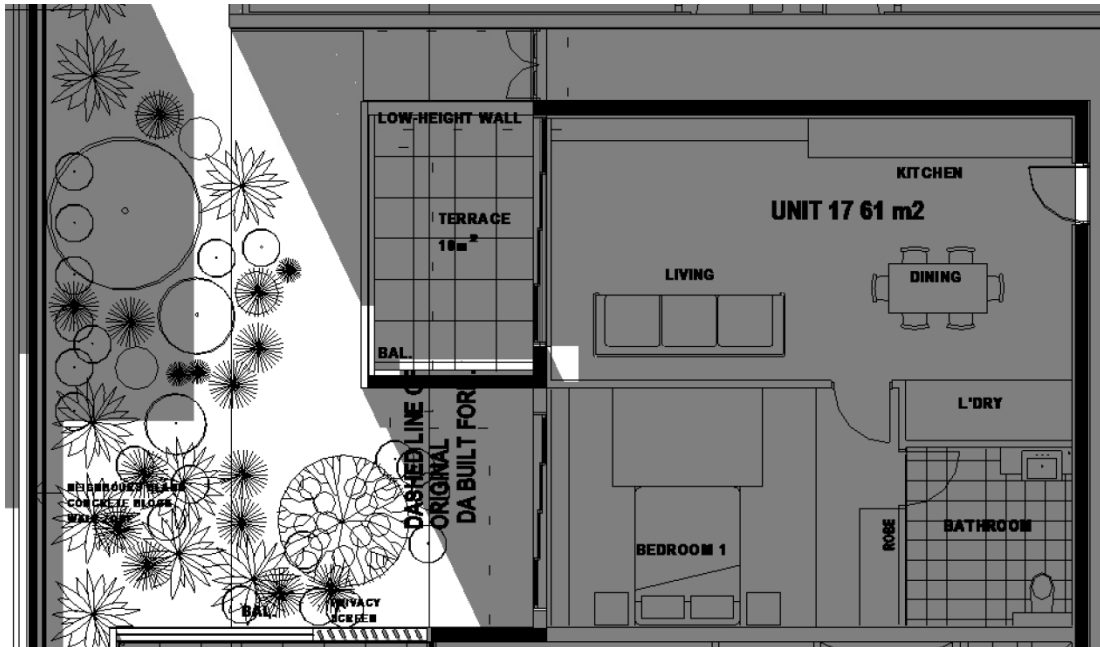


Sun access at 12pm on June 21st living and private open space

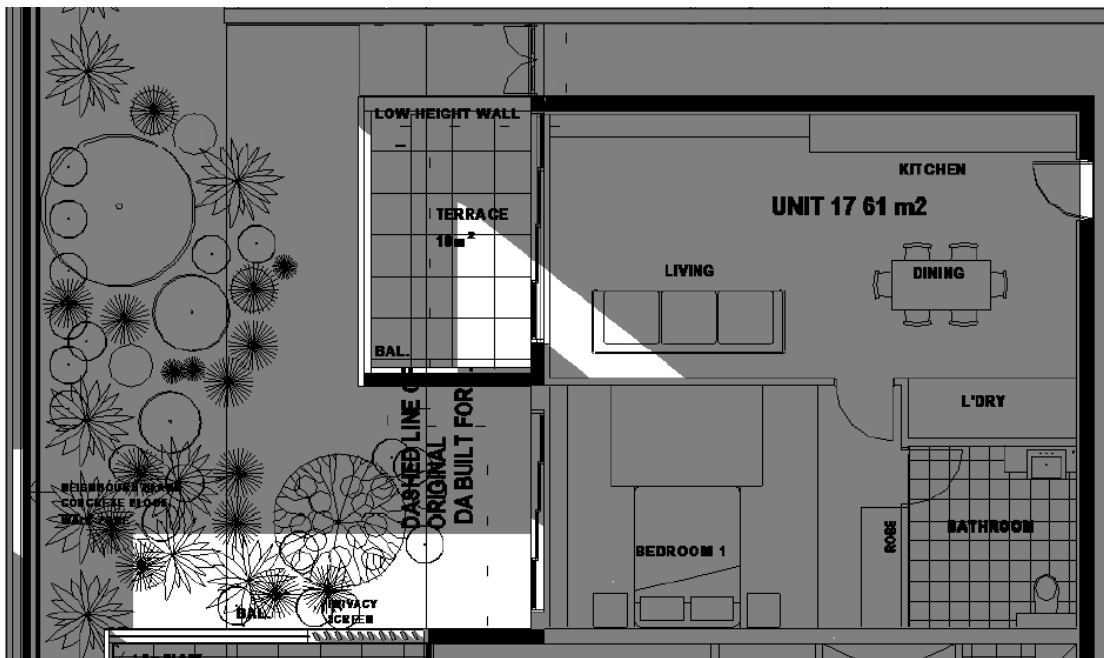


Sun access at 2pm on June 21st living and private open space

APARTMENT 17

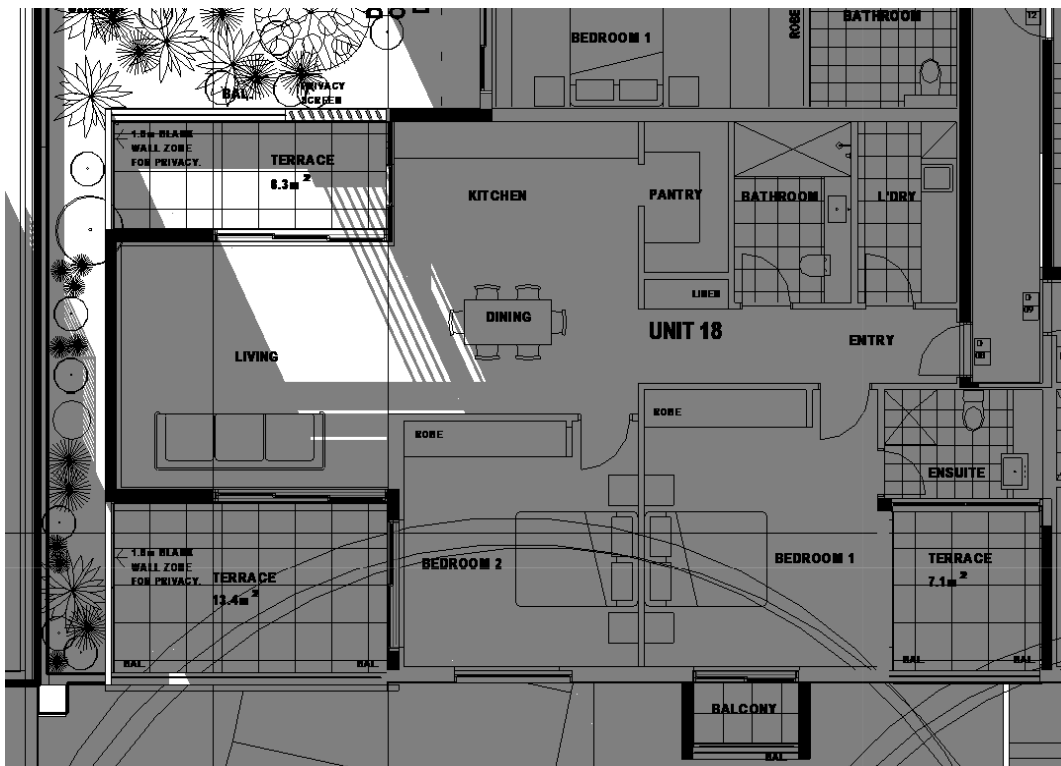


Sun access at 1pm on June 21st living and private open space.

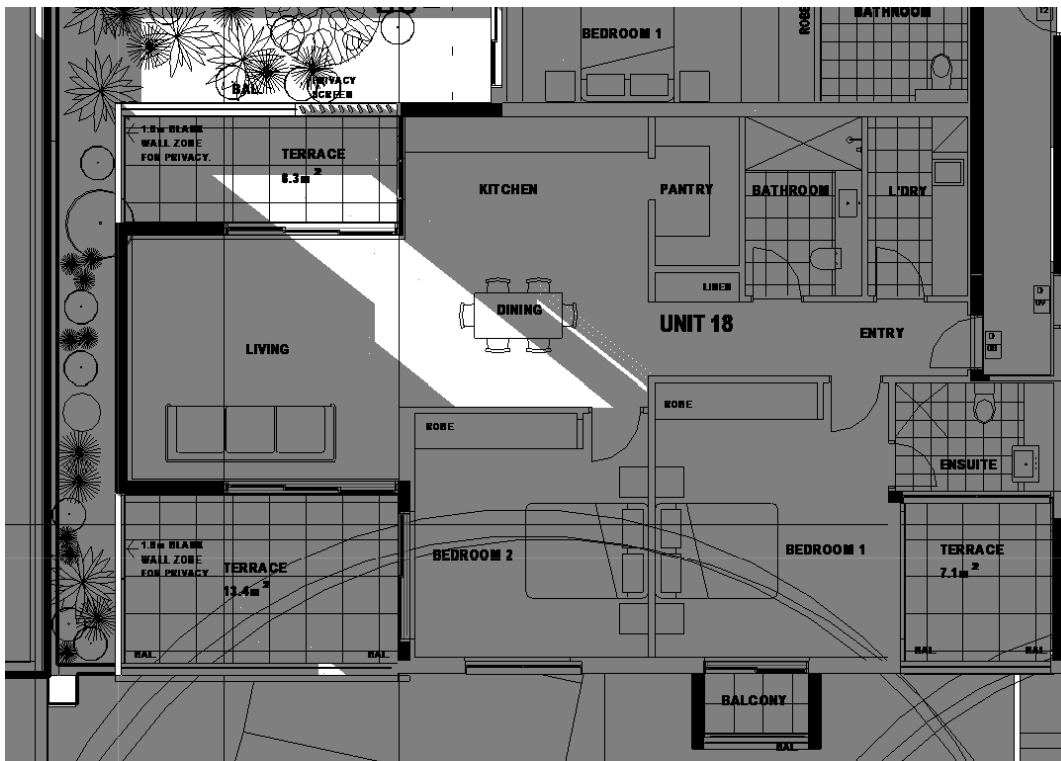


Sun access at 3pm on June 21st living and private open space

APARTMENT 18

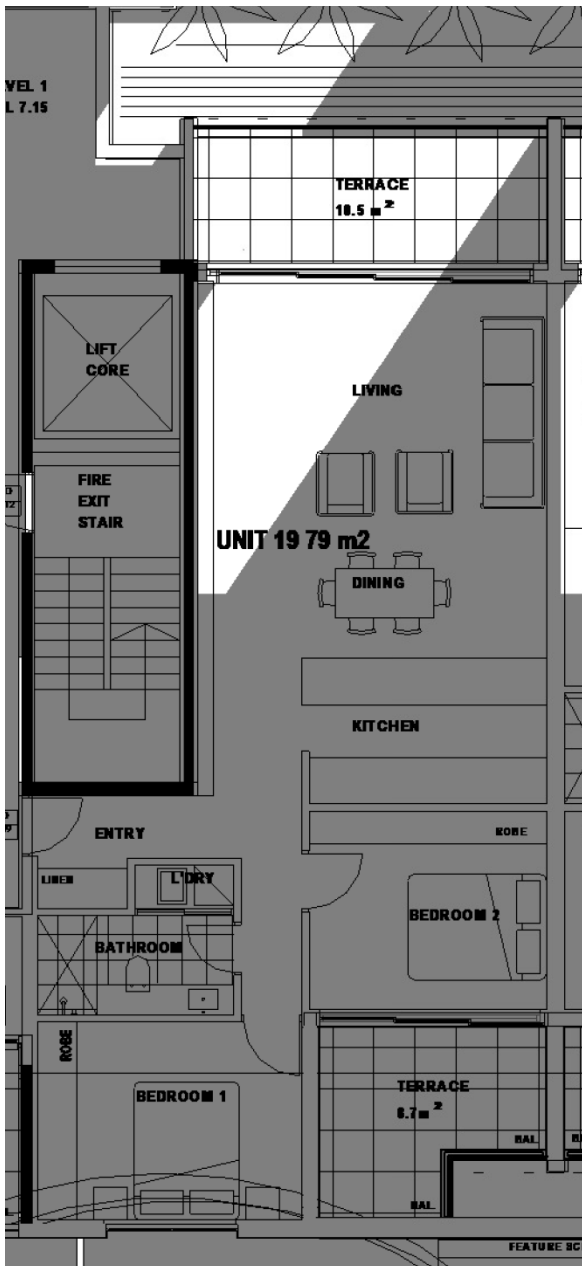


Sun access at 1pm on June 21st living and private open space

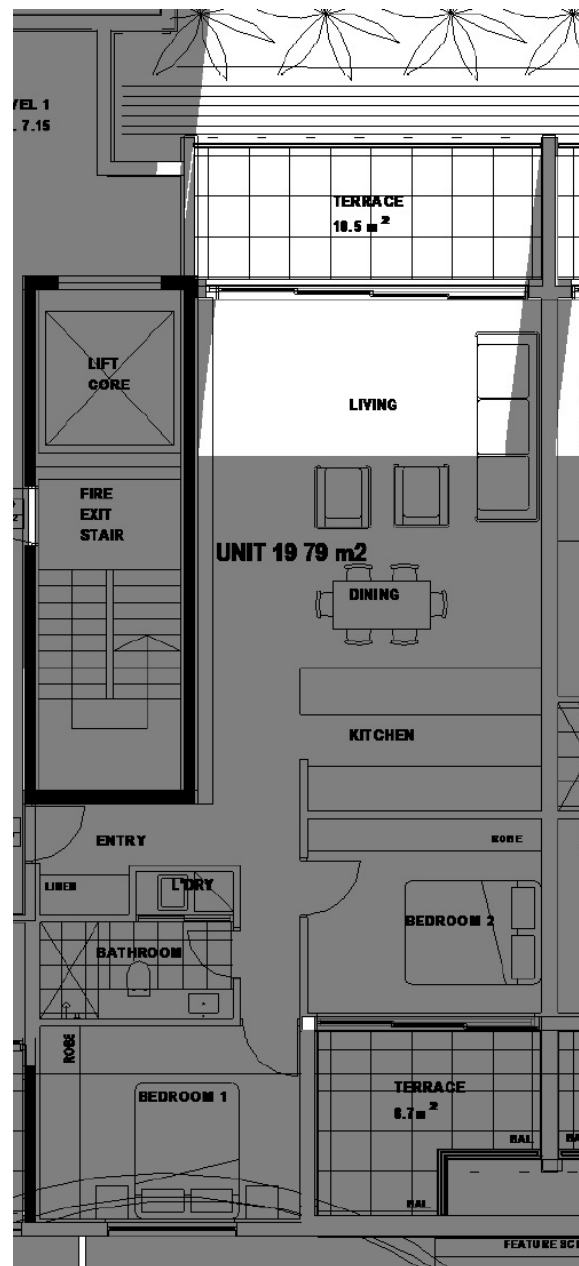


Sun access at 3pm on June 21st living and private open space

APARTMENT 19



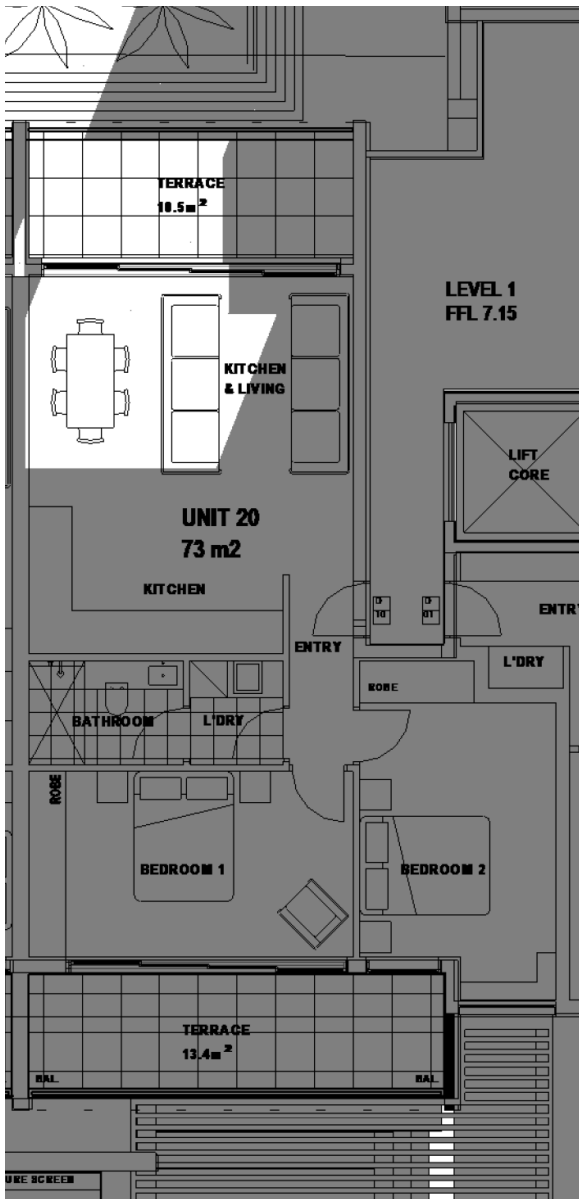
9am



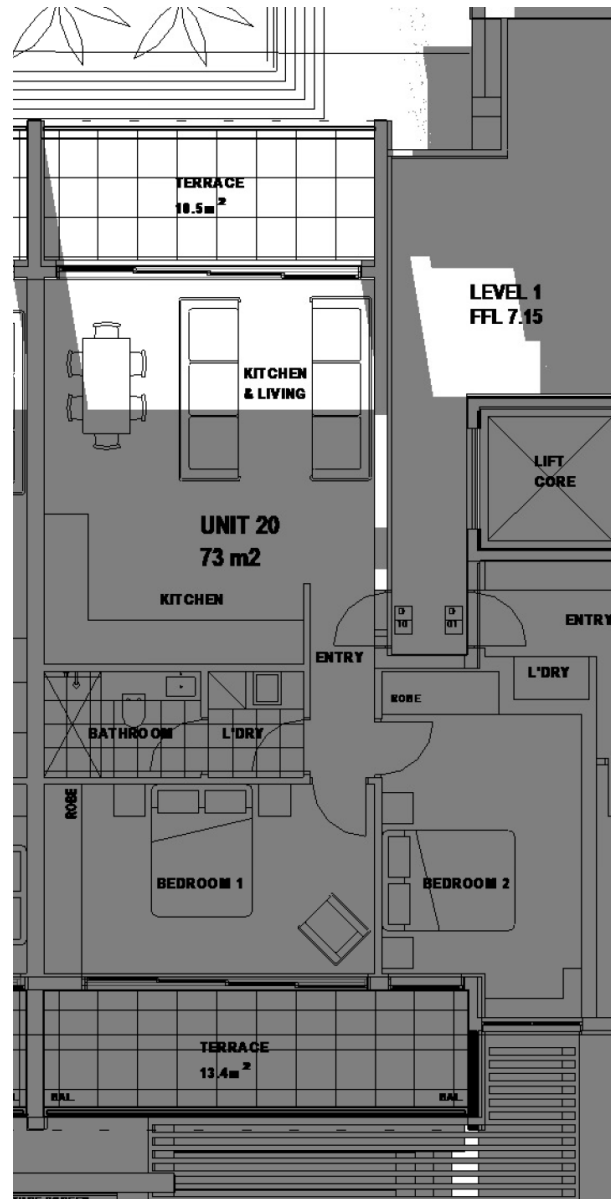
11am

Sun access at 9am & 11am on June 21st living and private open space

APARTMENT 20



10am

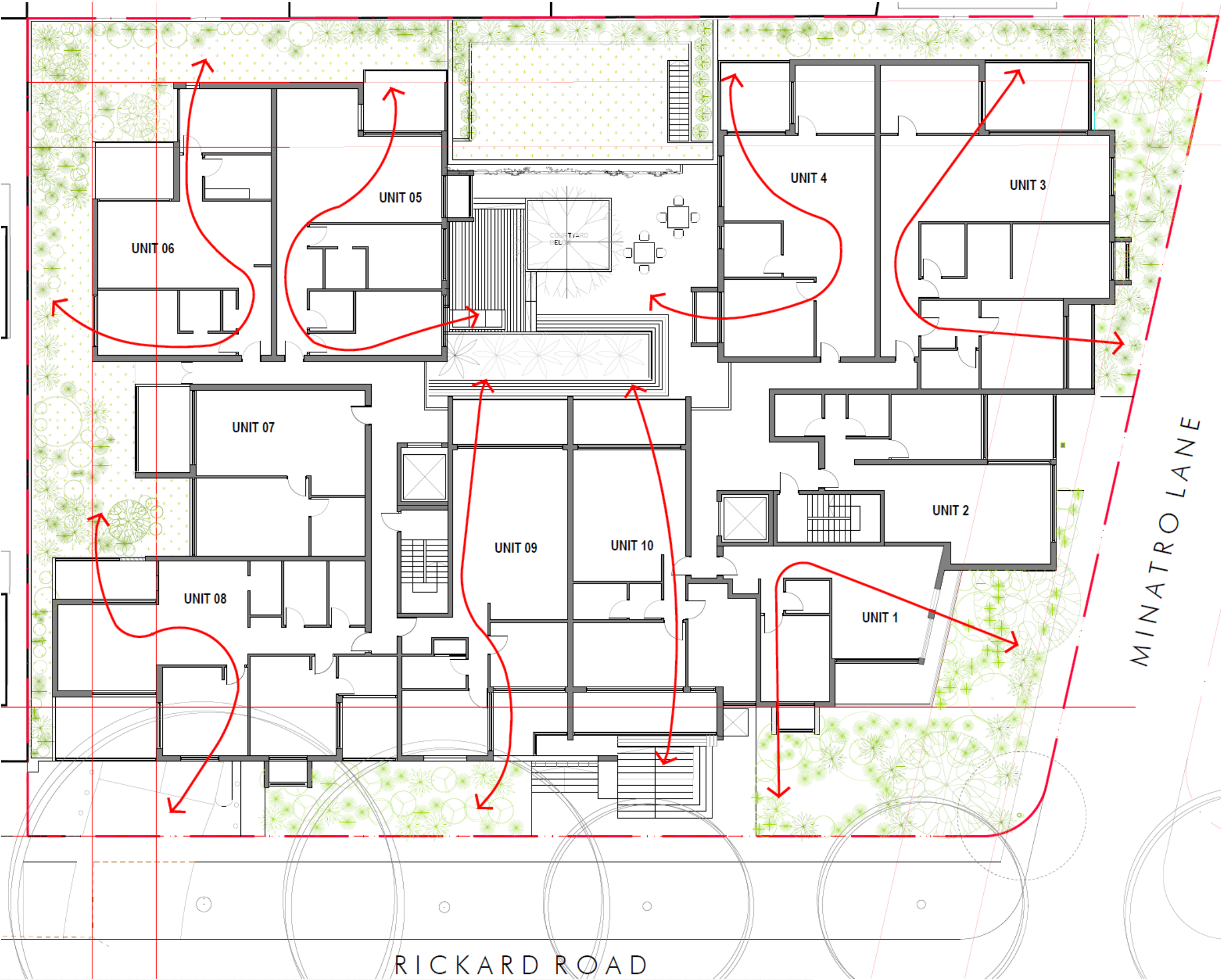


12pm

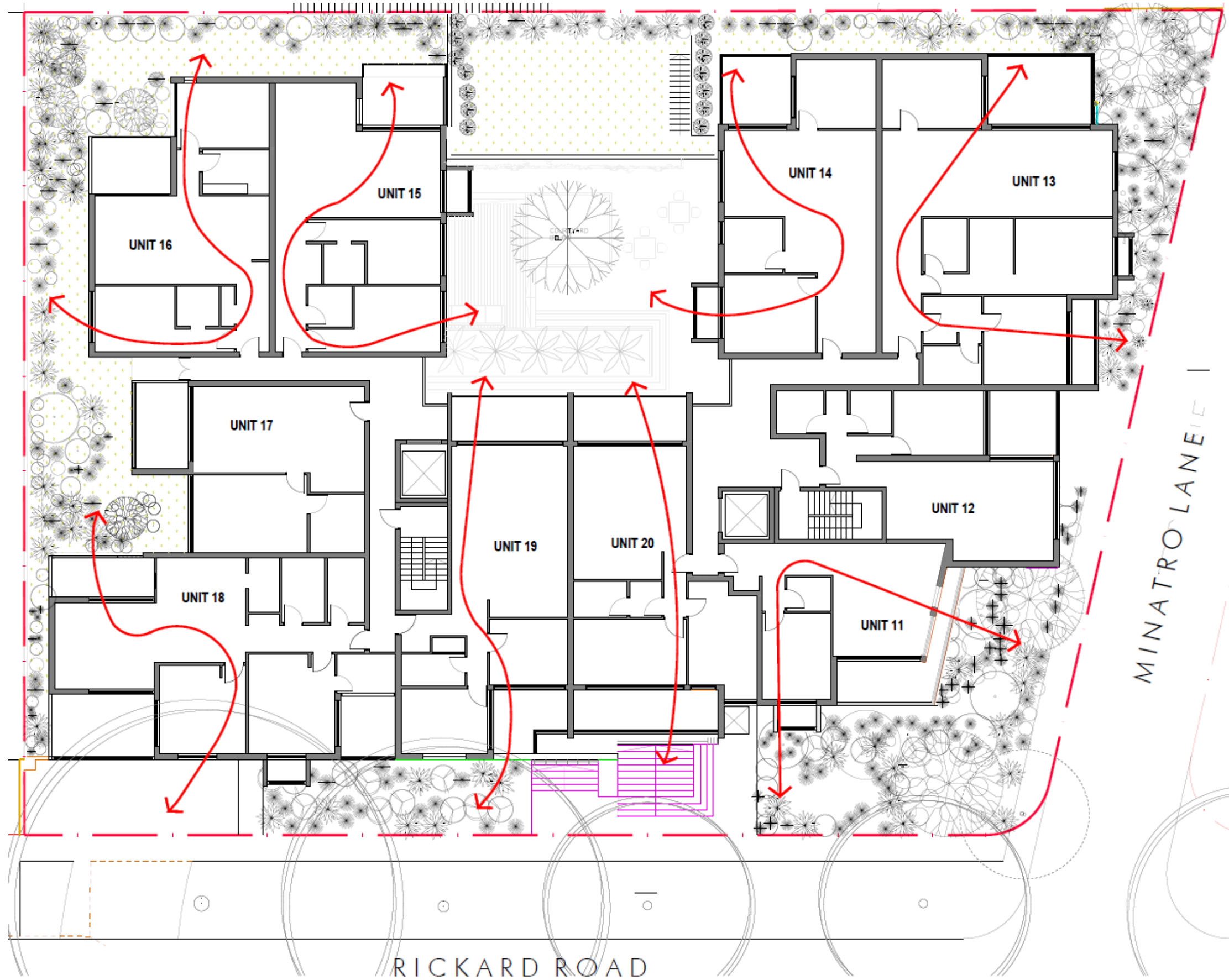
Sun access at 10am & 12pm on June 21st living and private open space

ATTACHMENT 4 - Cross Ventilation Analysis –
Natural cross ventilation is achieved by apartments having more than one aspect with direct exposure to the prevailing winds, or windows located in significantly different pressure regions, rather than relying on purely wind driven air.

FIRST FLOOR RESIDENTIAL – CROSS VENTILATION ANALYSIS



VENTILATION	
APARTMENT 1	= COMPLIES
APARTMENT 2	=
APARTMENT 3	= COMPLIES
APARTMENT 4	= COMPLIES
APARTMENT 5	= COMPLIES
APARTMENT 6	= COMPLIES
APARTMENT 7	=
APARTMENT 8	= COMPLIES
APARTMENT 9	= COMPLIES
APARTMENT 10	= COMPLIES



VENTILATION

- APARTMENT 11 = COMPLIES
- APARTMENT 12 =
- APARTMENT 13 = COMPLIES
- APARTMENT 14 = COMPLIES
- APARTMENT 15 = COMPLIES
- APARTMENT 16 = COMPLIES
- APARTMENT 17 =
- APARTMENT 18 = COMPLIES
- APARTMENT 19 = COMPLIES
- APARTMENT 20 = COMPLIES

