

PROPOSED RESIDENTIAL DEVELOPMENT
AT 21-27 WALTER STREET, WILLOUGHBY

UNIT SCHEDULE

21-27 WALTER ST (JOB no.1608)

UNIT	UNIT TYPE						NET AREA m2	PRIVATE OPEN SPACE			STORAGE				DAYLIGHT DCP 2006 & SEPP 65 req. 70%	CROSS VENT. DCP 2006 & SEPP 65 req. 60%	CAR PARKING	
	STD	1B	1B+	2B	2B+	3B		DCP 2006 req. m2	ADG req. m2	Provided m2	DCP 2006 req. m3	ADG req. m3	Provided in unit m3	Provided in Basement m3			DCP 2006 req.	Provided
G01				1			77	10.0	10.0	13.0	3.0	8.0	4.0	5.0	1	1		1
G02				1			75	10.0	10.0	10.0	3.0	8.0	4.0	5.0	1	1		1
G03		1					55	10.0	8.0	11.0	3.0	6.0	3.0	5.0		1		1
G04		1					52	10.0	8.0	9.0	3.0	6.0	6.0	0.0	1	1		1
G05		1					50	10.0	8.0	11.0	3.0	6.0	3.0	5.0				1
G06				1			78	10.0	10.0	11.0	3.0	8.0	4.0	5.0	1	1		1
G07				1			80	10.0	10.0	20.0	3.0	8.0	4.0	6.9		1		1
G08				1			80	10.0	10.0	20.0	3.0	8.0	4.0	6.7		1		1
109				1			77	10.0	10.0	13.0	3.0	8.0	4.0	5.0	1	1		1
110				1			75	10.0	10.0	10.0	3.0	8.0	4.0	5.0	1	1		1
111						1	108	10.0	12.0	10.0	3.0	10.0	5.0	5.0	1	1		2
112		1					52	10.0	8.0	9.0	3.0	6.0	6.0	0.0	1	1		1
113		1					50	10.0	8.0	11.0	3.0	6.0	3.0	5.0				1
114				1			78	10.0	10.0	11.0	3.0	8.0	4.0	5.0	1	1		1
115				1			80	10.0	10.0	19.0	3.0	8.0	4.0	6.8	1	1		1
116				1			80	10.0	10.0	19.0	3.0	8.0	4.0	6.7	1	1		1
217				1			77	10.0	10.0	13.0	3.0	8.0	4.0	5.0	1	1		1
218				1			75	10.0	10.0	10.0	3.0	8.0	4.0	5.0	1	1		1
219		1					52	10.0	8.0	10.0	3.0	6.0	6.0	0.0	1	1		1
220		1					50	10.0	8.0	12.0	3.0	6.0	3.0	5.0				1
221				1			78	10.0	10.0	11.0	3.0	8.0	4.0	5.0	1	1		1
222				1			80	10.0	10.0	19.0	3.0	8.0	4.0	5.0	1	1		1
223				1			80	10.0	10.0	19.0	3.0	8.0	4.0	5.0	1	1		1
324				1			88	10.0	10.0	34.0	3.0	8	4.0	5.0	1	1		1
325				1			90	10.0	10.0	90.0	3.0	8	5.0	6.7	1	1		1
326				1			81	10.0	10.0	81.0	3.0	8	4.0	5.0	1	1		1
Common Room																1		
427				1			85	10.0	10.0	43.0	3.0	8	4.0	5.0	1	1		1
428				1			89	10.0	10.0	93.0	3.0	8	8.0	0.0	1	1		1
529						1	145	10.0	12.0	60	3.0	10	14.0	0.0	1	1		2
																	VISITOR	7
Total:	0	7	0	20	0	2	2218			702.0	87.0		134.0	128.8	23.0	27.0	0.0	38
																	(including x Disabled Carospace)	(including 4 Disabled Carspaces)
%	0%	24%	0%	69%	0%	7%									79.3%	93.1%		
%	0%	24%		69%		7%												

Total Units 29

SITE AREA = 2448.32

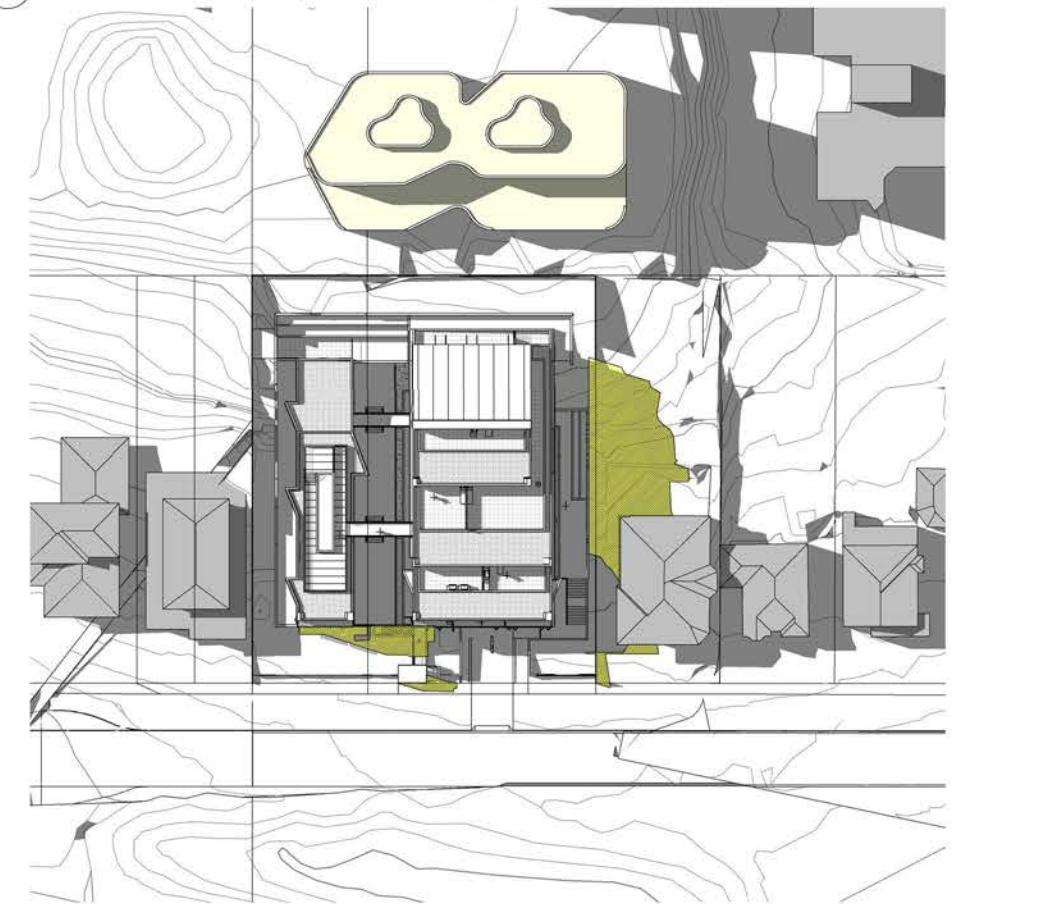
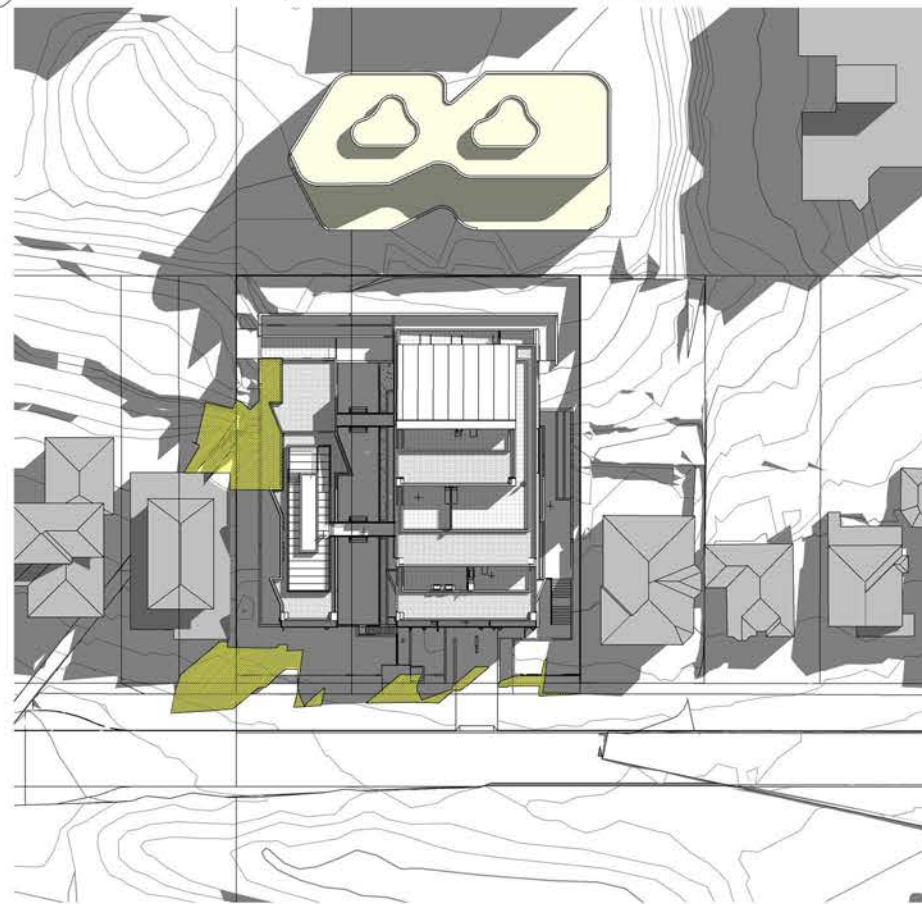
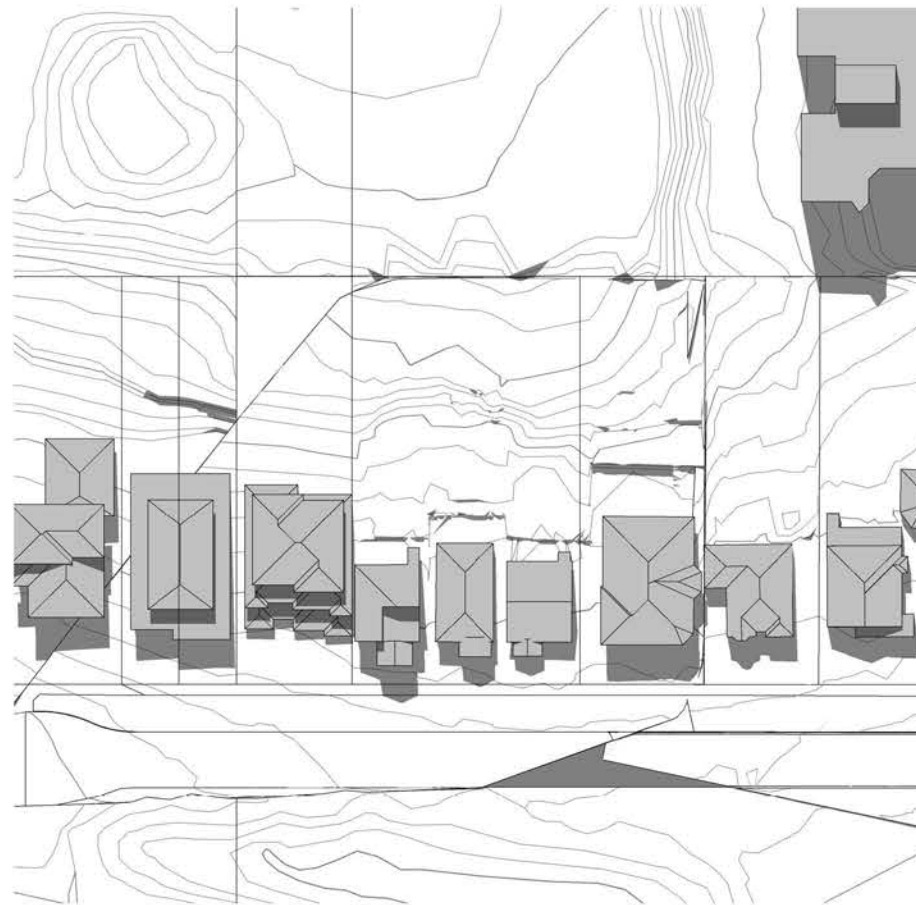
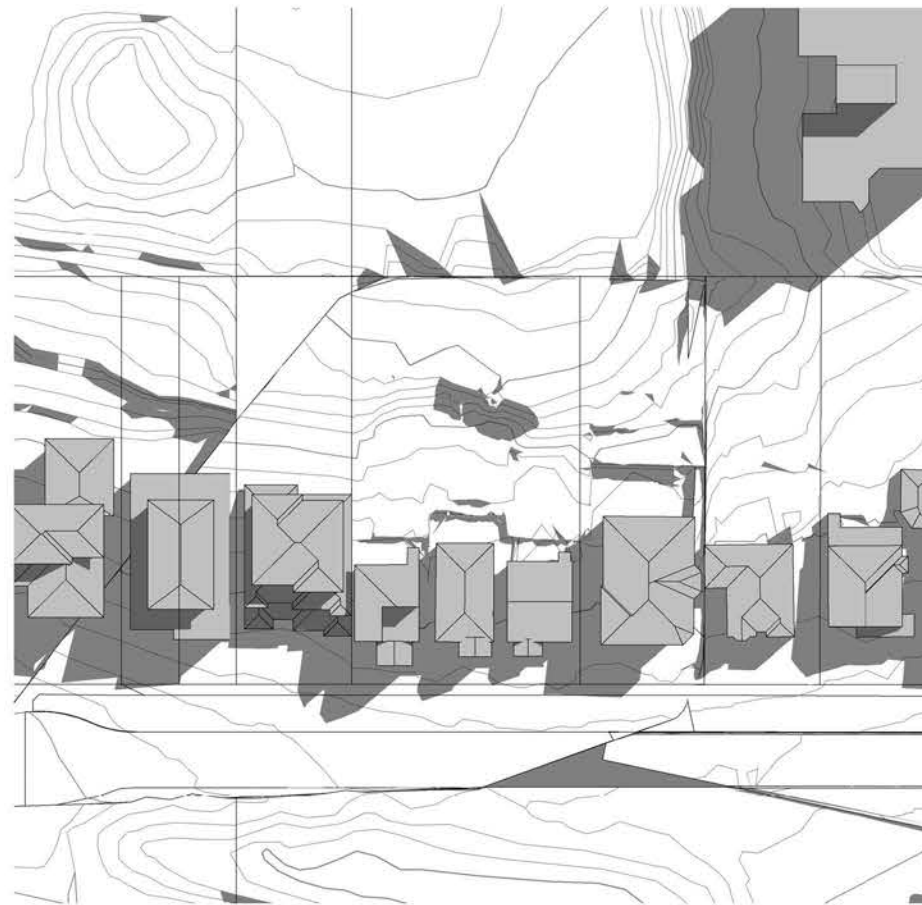
	NET	GROSS
GROUND FLOOR	547	569
LEVEL 1	600	581
LEVEL 2	492	579
LEVEL 3	259	336
LEVEL 4	174	224
LEVEL 5	145	116
TOTAL	2218	2405
4% Affording Housing		96
FSR (Including 4%)		0.98 :1
FSR (Excluding 4%)		0.94 :1



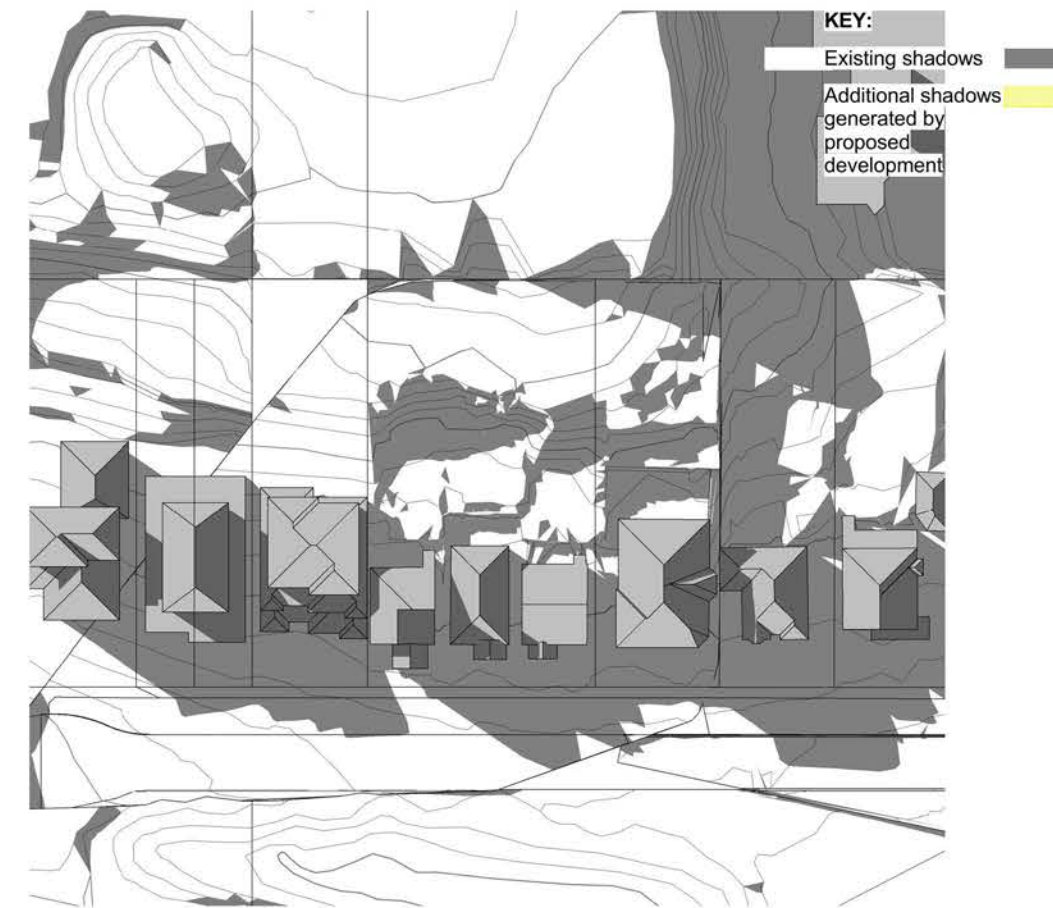
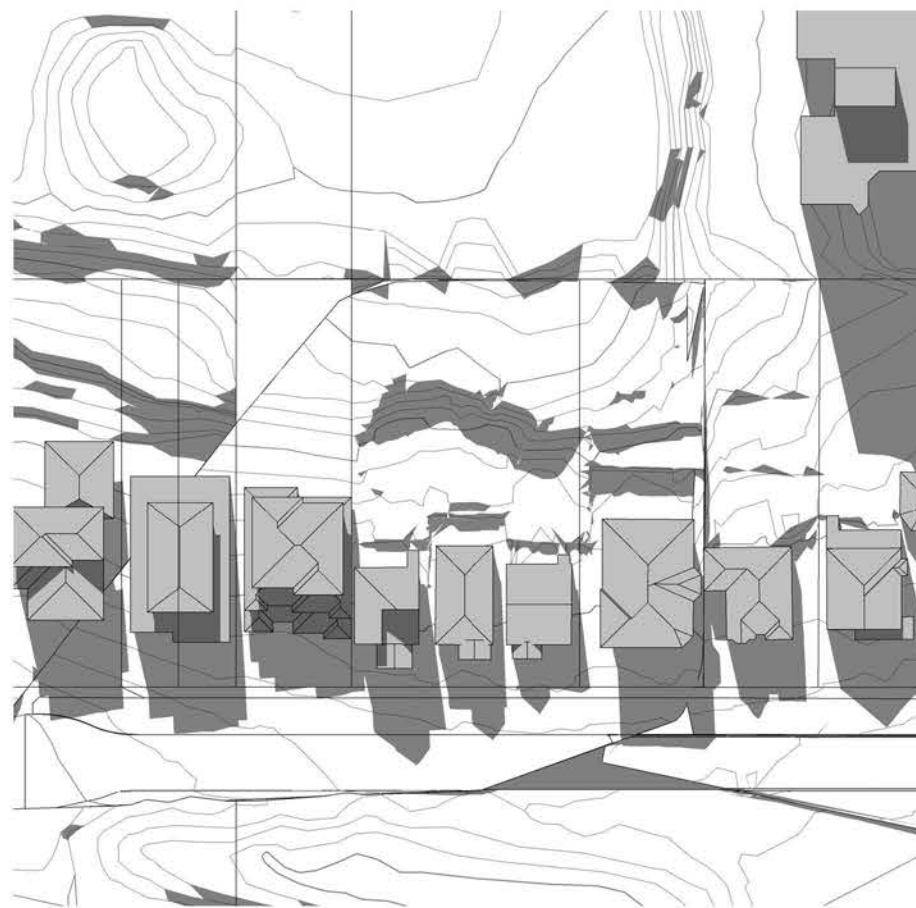
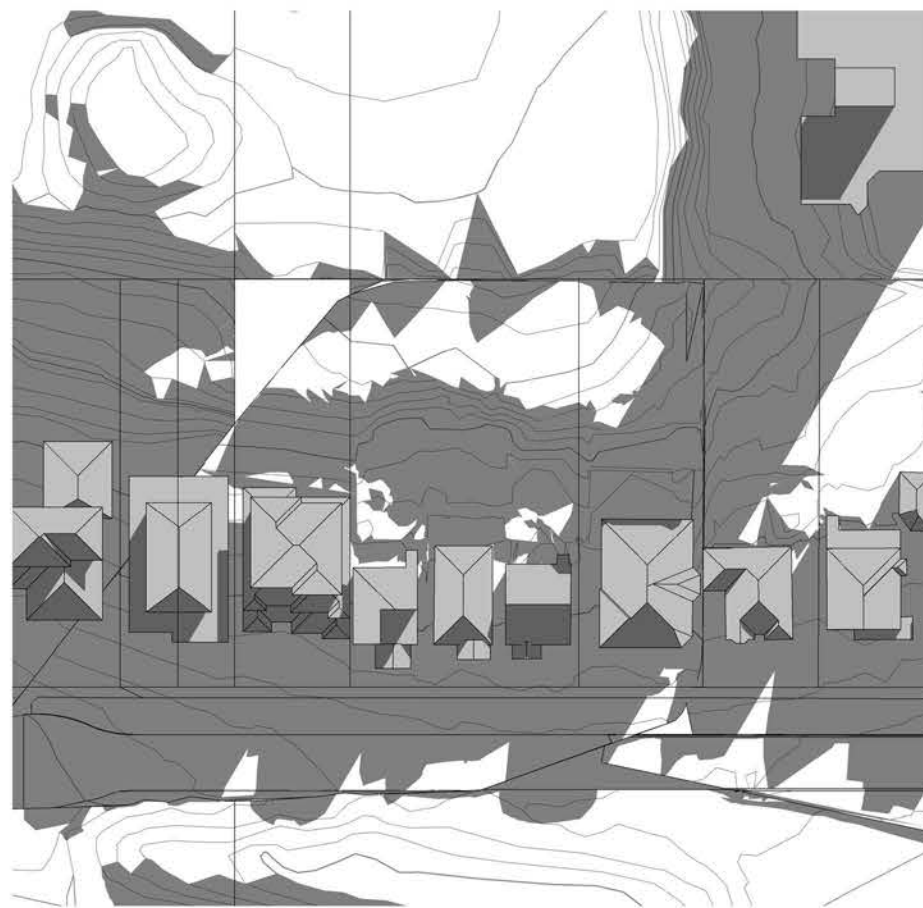
Sheet List	
Sheet Number	Sheet Name
A.001	COVER SHEET
A.002	SITE SURVEY
A.003	SITE ANALYSIS
A.004	SITE COVERAGE & LANDSCAPE AREA
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A.100	GROUND FLOOR
A.101	LEVEL 1
A.102	LEVEL 2
A.103	LEVEL 3
A.104	LEVEL 4
A.105	LEVEL 5
A.106	ROOF PLAN
A.150	NORTH ELEVATION
A.151	WALTER ST SOUTH ELEVATION
A.152	EAST BLOCK - EAST ELEVATION
A.153	EAST BLOCK - WEST ELEVATION
A.154	WEST BLOCK - WEST ELEVATION
A.155	WEST BLOCK - EAST ELEVATION
A.160	CROSS SECTION 01 - LOW
A.161	CROSS SECTION 02 - MID
A.162	CROSS SECTION 03 - HIGH
A.163	LONG SECTION 01
A.164	LONG SECTION 02
A.165	LONG SECTION 03
A.170	DRIVEWAY SECTION
A.180	MATERIAL FINISHES 01
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A.202	GROSS FLOOR AREA
A.203	SOLAR & CROSS-VENTILATION DIAGRAMS
A.204	ADAPTABLE UNITS G05&113&220/G06&114&221
A.205	ADAPTABLE UNIT G01&109&217/G02&110&218
A.206	ADAPTABLE 325
A.207	ADAPTABLE UNITE 326
A.208	ADAPTABLE UNIT 324
A.209	ADAPTABLE 427
A.700	SHADOW DIAGRAMS - MARCH
A.701	SHADOW DIAGRAMS - MID-WINTER
A.702	SHADOW DIAGRAMS - SEPTEMBER

North	Issue	Amendments	Date	Project	Client		Title	Scale	Job No
	A	Issue for Pre-D.A.	23/08/16	PROPOSED RESIDENTIAL DEVELOPMENT AT 21-27 WALTER ST, WILLOUGHBY	WALTER PROJECTS PTY LTD				1608
	B	Issue for consultants	09/09/16		ATF/ WALTER DEVELOPMENTS TRUST				
	C	Issue for consultants	07/10/16				COVER SHEET	Date	Drawn
	D	DA SUBMISSION	07/11/16					07/11/2016	BS,WS,YH
				Do not scale off this drawing. Use figured dimensions only. Verify all dimensions on site prior to commencement of any work.@2009 Copyright remains the property of ARCHITECTURE URBANEIA PTY LTD ABN50169207818.All works to be in accordance with Australian standards, the building code of Australia and manufacturers recommendations and instructions.				Dwg No	Issue
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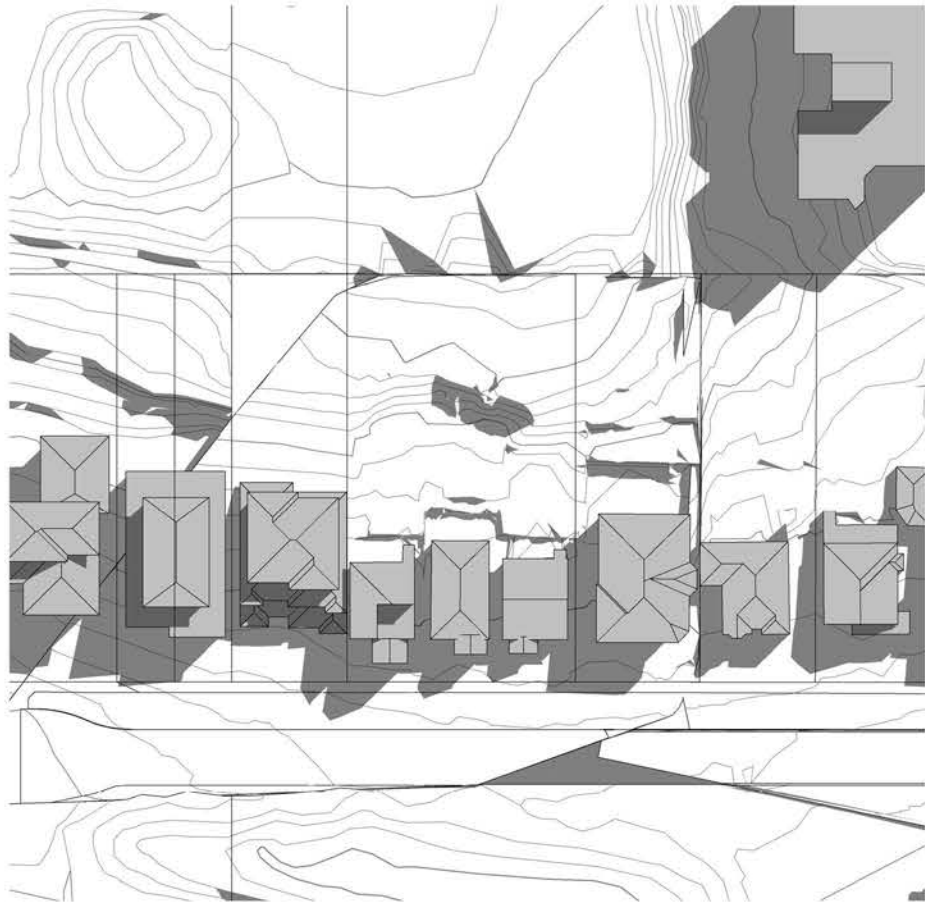
ARCHITECTURE URBANEIA
1/53 HUME STREET CROWS NEST NSW 2065
ABN 50169207818 M. CHEHELNABI REGD. ARCH. NO. 7057
T: 02 80948420 M: 0404 110 316 & 0403 900 235



	Issue	Amendments	Date	Project	Client		Title	Scale 1:500 @ A1 1:1000 @ A3	Job No 1608
	A	Issue for Pre-D.A.	23/08/16	PROPOSED RESIDENTIAL DEVELOPMENT AT 21-27 WALTER ST, WILLOUGHBY Do not scale off this drawing. Use figured dimensions only. Verify all dimensions on site prior to commencement of any work.@2009 Copyright remains the property of ARCHITECTURE URBANEIA PTY LTD ABN50169207818.All works to be in accordance with Australian standards, the building code of Australia and manufacturers recommendations and instructions.	WALTER PROJECTS PTY LTD ATF/ WALTER DEVELOPMENTS TRUST	 1/53 HUME STREET CROWS NEST NSW 2065 ABN 50169207818 M. CHEHELNABI REGD. ARCH. NO. 7057 T: 02 80948420 M: 0404 110 316 & 0403 900 235	SHADOW DIAGRAMS - MARCH	Date 07/11/2016 Dwg No A.700	Drawn MA Issue C
	B	Issue for consultants	09/09/16						
	C	DA SUBMISSION	07/11/16						



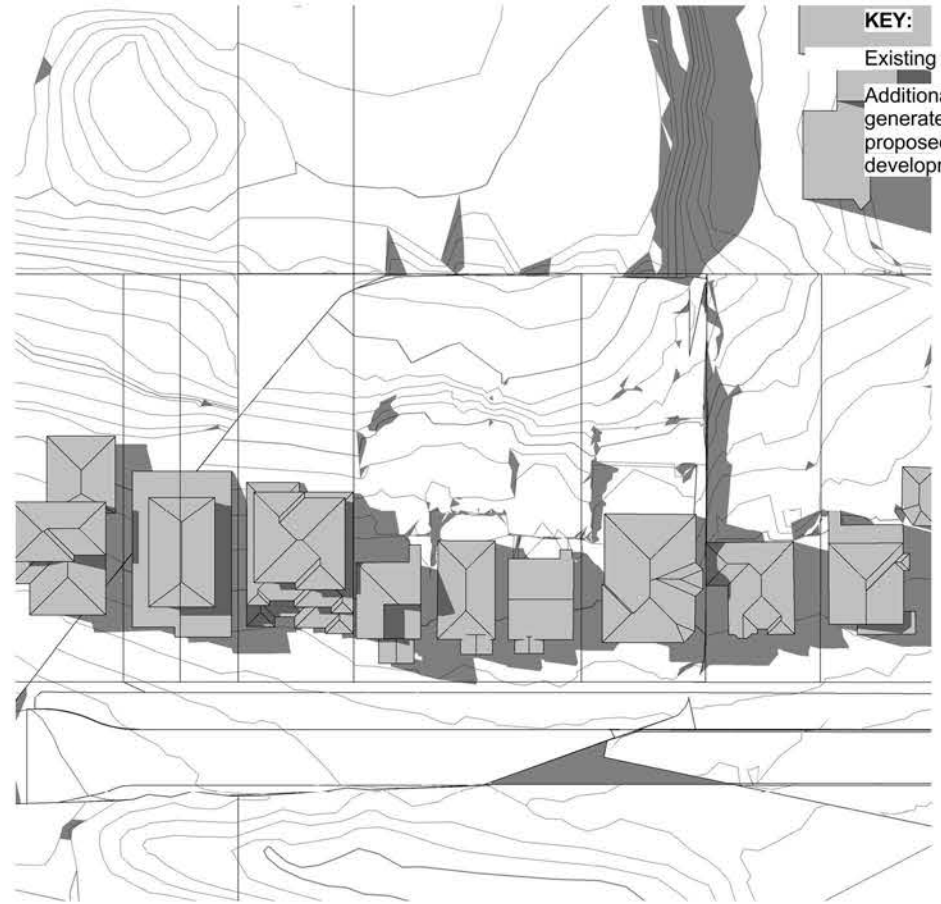
④ SHADOW STUDY,MID WINTER 9 AM - PROPOSED				⑤ SHADOW STUDY,MID WINTER 12 PM - PROPOSED				⑥ SHADOW STUDY,MID WINTER 3 PM - PROPOSED			
North	Issue	Amendments	Date	Project	Client			Title	Scale	Job No	
	A	Issue for Pre-D.A.	23/08/16	PROPOSED RESIDENTIAL DEVELOPMENT AT 21-27 WALTER ST, WILLOUGHBY	WALTER PROJECTS PTY LTD ATF/ WALTER DEVELOPMENTS TRUST		SHADOW DIAGRAMS - MID-WINTER	1:500 @ A1	1608		
	B	Issue for consultants	09/09/16					Date	Drawn		
	C	DA SUBMISSION	07/11/16					07/11/2016	MA		
Do not scale off this drawing. Use figured dimensions only. Verify all dimensions on site prior to commencement of any work.@2009 Copyright remains the property of ARCHITECTURE URBANEIA PTY LTD ABN50169207818.All works to be in accordance with Australian standards, the building code of Australia and manufacturers recommendations and instructions.						1/53 HUME STREET CROWS NEST NSW 2065		Dwg No	Issue		
						ABN 50169207818 M. CHEHELNABI REGD. ARCH. NO. 7057 T: 02 80948420 M: 0404 110 316 & 0403 900 235		A.701	C		



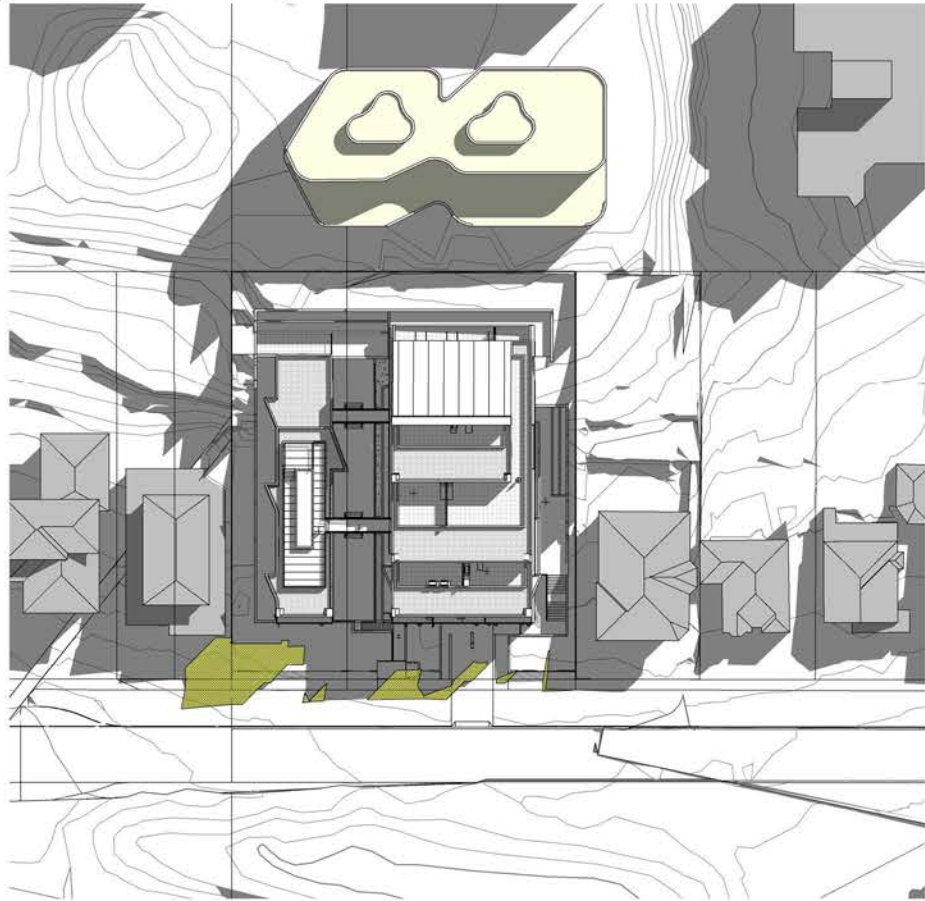
1 SHADOW STUDY,SEP 9 AM - EXISTING



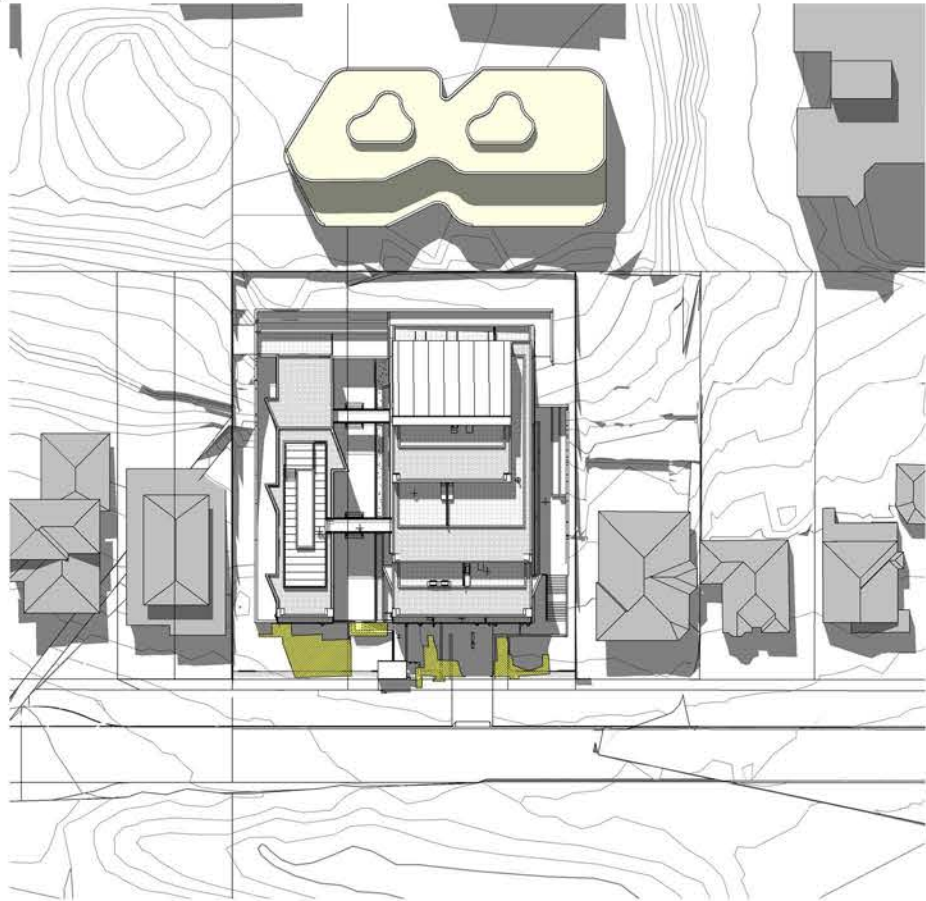
2 SHADOW STUDY,SEP 12 PM - EXISTING



3 SHADOW STUDY,SEP 3 PM - EXISTING



4 SHADOW STUDY,SEP 9 AM - PROPOSED

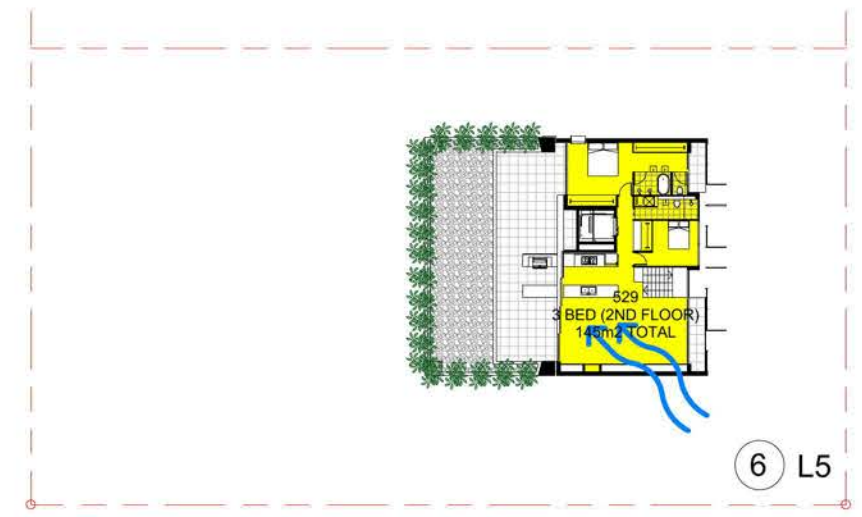
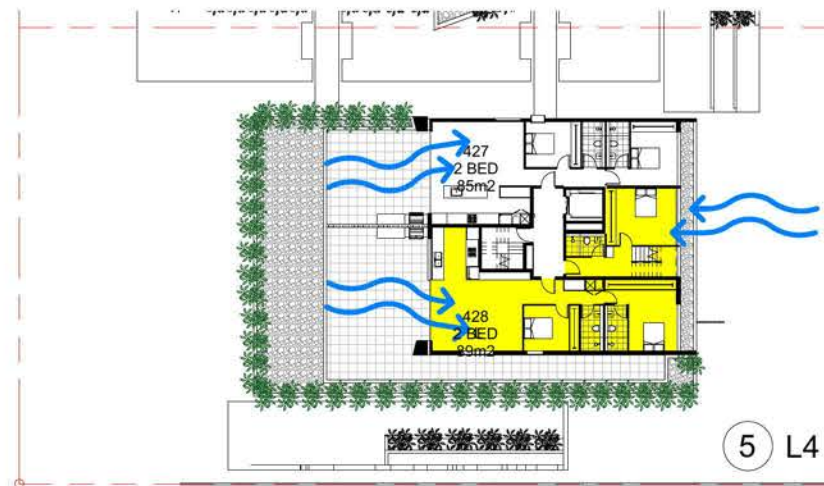
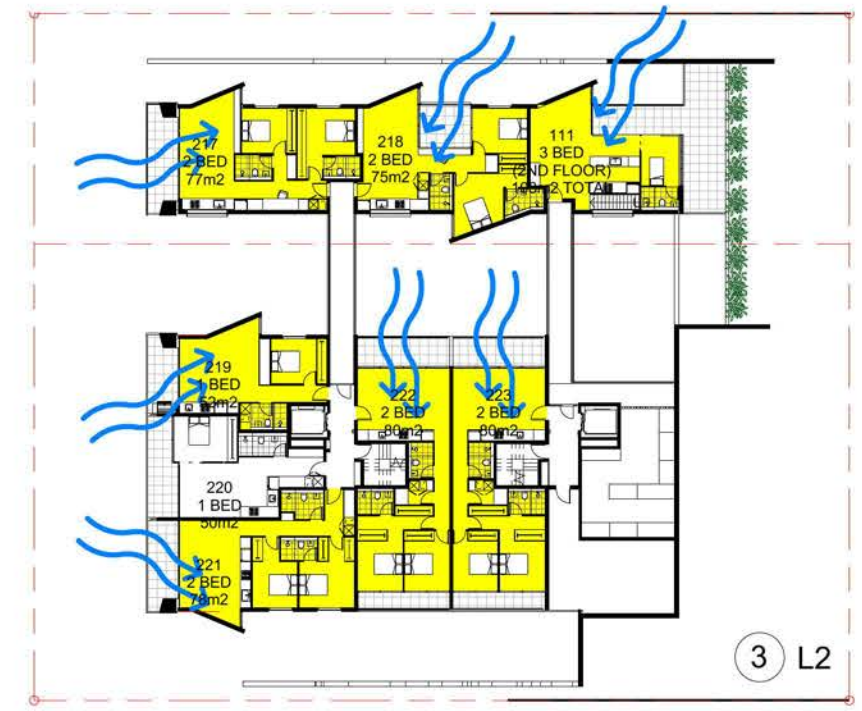
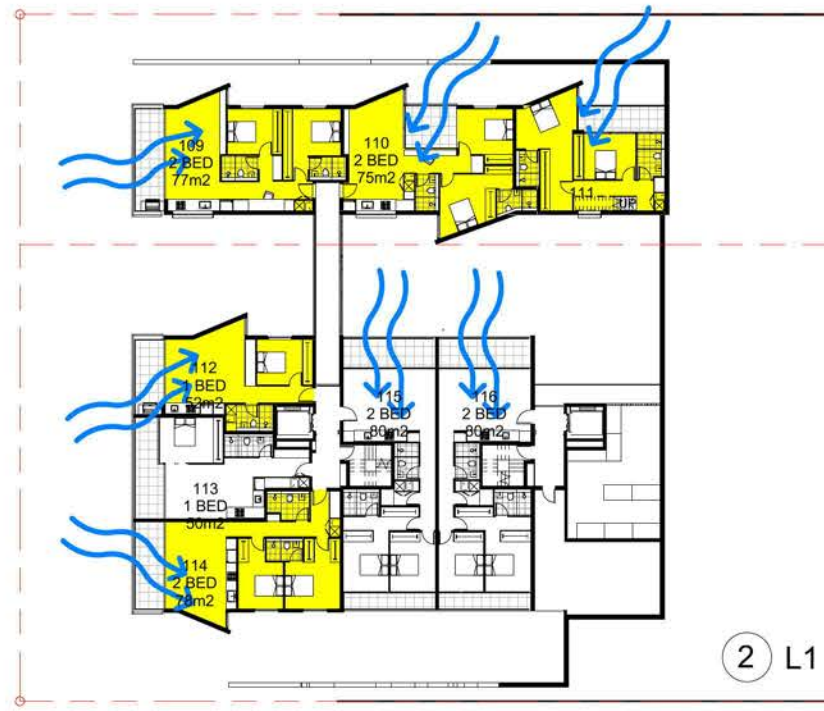
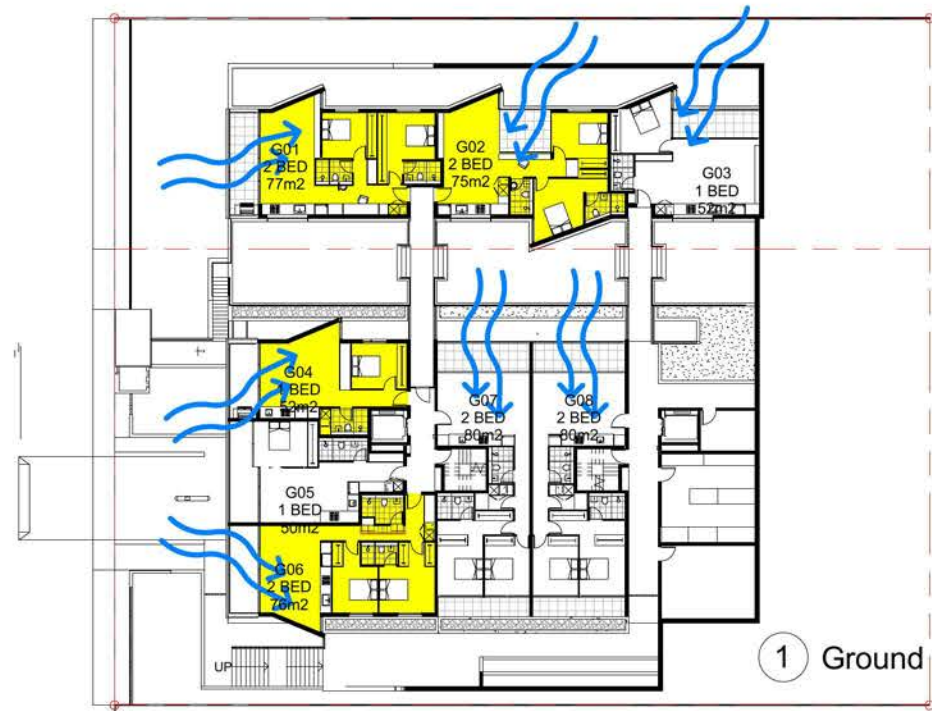


5 SHADOW STUDY,SEP 12 PM - PROPOSED



6 SHADOW STUDY,SEP 3 PM - PROPOSED

North	Issue	Amendments	Date	Project	Client	 1/53 HUME STREET CROWS NEST NSW 2065 ABN 50169207818 M. CHEHELNABI REGD. ARCH. NO. 7057 T: 02 80948420 M: 0404 110 316 & 0403 900 235	Title	Scale	Job No	
	A	Issue for Pre-D.A.	23/08/16	PROPOSED RESIDENTIAL DEVELOPMENT AT 21-27 WALTER ST, WILLOUGHBY	WALTER PROJECTS PTY LTD ATF/ WALTER DEVELOPMENTS TRUST			1:500 @ A1	1608	
	B	Issue for consultants	09/09/16					Date	Drawn	
	C	DA SUBMISSION	07/11/16					07/11/2016	MA	
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									A.702	C



APARTMENT WITH SOLAR ACCESS

APARTMENT WITH CROSS-VENTILATION

SOLAR ACCESS
21 / 29 = 72%

COMPLIANT

CROSS-VENTILATION
26 / 29 = 90%

COMPLIANT

North N 	Issue	Amendments	Date	Project	Client	AU ARCHITECTURE URBANEIA 1/53 HUME STREET CROWS NEST NSW 2065 ABN 50169207818 M. CHEHELNABI REGD. ARCH. NO. 7057 T: 02 80948420 M: 0404 110 316 & 0403 900 235	Title	Scale 1:250 @ A1 1:500 @ A3	Job No 1608
	A	Issue for consultants	09/09/16	PROPOSED RESIDENTIAL DEVELOPMENT AT 21-27 WALTER ST, WILLOUGHBY	WALTER PROJECTS PTY LTD ATF/ WALTER DEVELOPMENTS TRUST		SOLAR & CROSS-VENTILATION DIAGRAMS	Date	Drawn
	B	Issue for consultants	06/10/16					07/11/2016	BS, YH
	C	Issue for consultants	07/10/16					Dwg No	Issue
	D	DA SUBMISSION	07/11/16					A.203	D

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SEPP 65 DESIGN VERIFICATION STATEMENT

**PROPOSED RESIDENTIAL DEVELOPMENT AT
21-27 WALTER STREET WILLOUGHBY NSW 2068
FOR**

**Walter Projects Pty Ltd ATF/
Walter Developments Trust**

7th November 2016

Issue A – Development application to Willoughby Council

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-Sepp 65 Design verification

-Introduction

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- 2 Built form and Scale

- 3 Density

- 4 Sustainability

- 5 Landscape

- 6 Amenity

- 7 Safety & security

- 8 Social dimensions & affordable housing

- 9 Aesthetics

-Conclusion

Pursuant to Clause 50 (1A) of the Environmental Planning & Assessment Regulation 2000, I hereby declare that I am a qualified designer, which means a person registered as an architect in accordance with the Architects' Act 2003, as defined by Clause 3 of the Environmental Planning & Assessment Regulation 2000.

I directed the design of the residential flat development stated above and I confirm that the Development has been designed to achieve the design quality principles set out in Part 2 of the State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development.

M. ChehelNabi
B. Arch. UTS
Registered Architect 7057

This design statement has been prepared by Architecture Urbaneia Pty Ltd to accompany a development application to Willoughby Council for a Residential Development at 21-27 Walter Street Willoughby NSW.

This assessment is made in accordance with the Design Quality Principles as set out in Part 3 of SEPP 65 – Residential Flat Design Code and SEPP No 65 – Design Quality of Residential Flat Development.

The aims of these regulations are to improve the design quality of residential development in NSW by ensuring sustainable developments. This report addresses these requirements and should be read in conjunction with the Architectural design drawings, Statement of Environmental Effects and supplementary reports by other consultants which form part of the Development application submission.

.....
M. ChehelNabi
B.Arch UTS
Director – Architecture Urbaneia P/L
Registration No.7057

Introduction

SEPP 65 relates to residential flat buildings, which have three or more storey and 4 or more self-contained dwellings. This is located at 21-27 Walter Street Willoughby in the Parish of Willoughby Municipality. The proposed development application is for the demolition of 4 existing dwellings and construction of a 4 Storey Residential development, comprising of single level Basement parking for 38 car spaces; and 3-5 levels of residential accommodating 29 apartments. The residential component comprises of 7 x 1 bed, 20 x 2 bed and 2 X 3 bed plus apartments. The SEPP is therefore applicable to the proposed development.

General Approach

The site is located within the Willoughby local area as indicated in the Willoughby Council WLEP 2012 and is within the Residential R3 zone with a maximum height limit of 12m.

The design philosophy is derived from the site analysis, existing context and anticipated future character of this part of Willoughby, which is an area under transition from low scale single and 2 storey residential dwellings to 4 level multi-unit residential developments.

The proposal runs on an east west axis with its small façade facing Walter street. The proposal is broken up into 2 separate buildings linked by bridges and steps up towards the rear. One building on no 27 Walter Street comprises of 3 levels over the basement and the second building comprises of 3 levels and steps up to 5 levels at the rear of the site. The level 4 holds the common areas over each building and link via a bridge. The 2 buildings are linked by common roof top common areas that achieve solar access and outlook for all residents.

Deep soil zones have been proposed around the development to allow for large tree plantings and landscape solutions which help with the softening the development and reduce the perceived bulk to immediate neighbors. The perimeter of the development will be under the body corporate; maintaining the landscape quality at all times.

A series of existing trees have been retained at the rear elevation and have been shown on the Landscape plans by JLA and commented by Arborist Lee Handcock.

SEPP 65 Design Quality Principles

SEPP 65 contains design quality principles, which are to be considered in the design of a residential flat building. The proposal is assessed under these design principles below:

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.

The subject site is located at 21-27 Walter Street Willoughby within a Residential R3 Zone; with close proximity and walking distance to Public transport and Hallstrom Park across Willoughby road. The site located within Willoughby local area and has an area of 2448.32 sqm with deposited plan No.977055; DP 168467+ DP166910 in the Parish of Willoughby.

The site is located adjacent to high density residential buildings to the north of site with 5 to 9 storey residential buildings at Castle vale and low density private dwellings to the west at n0 29 and 31 Walter street which are also in the same R3 zone. The site is also adjoining the Channel 9 at the rear of 25 and 27 Walter street which has an L+C approval for 400 units. There is a recent application to increase the site yields to 510 units which is under consideration. For the purposes of this application we have taken the later for the shadow impact and site analysis purposes.

It is anticipated that Walter street will be transformed from the current low rise single and 2 storey character to 4 storey Residential buildings as anticipated in the current LEP 2012.

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 respect existing street pattern which seeks to maximize solar access and cross ventilation and does not cause any major impact to its surrounding neighbors to that of a fully compliant development.

Deep soil zones and setbacks have been proposed to all boundaries to create landscape buffers to adjoining properties. The proposed dense landscaping to the site's entire perimeter along with the 2 separated buildings, will reduce visual impact, and reduce the perceived bulk of the development from its immediate neighbors and public domain areas.

The proposed development responds to the existing, and future architectural character of the area, reflected in the building's urban form and materiality.

It is considered that the proposed development is congruent with the general and future context of the area, and the desired future characteristics, as defined in within the WDCP2012. The development responds appropriately to the adjoining developments and incorporates appropriate design elements to achieve good architectural merit within the existing context and future character of this area, which is under transition.

Principle 3: 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 built form of the proposed development is appropriate for the Walter Street streetscape and achieves the objectives of the relevant built form controls stipulated in the WDCP 2012.

The building has been designed to provide a modulated Facade with a linear form by emphasizing the horizontality of the façade. The side setbacks are in compliance with the DCP and Sepp 65 requirements meeting their Half share of 12m separation. The building has been setback by 6m on its eastern and western boundaries and meets its half share of Sepp 65 building separation. The building to rear has been set back by 9 and 10m.

The proposal will present itself as 2 separate buildings, with ground level access to common circulation and access to 2 separate lift lobbies linking all levels. Both Buildings will present as 3 storey from the street sitting over a sandstone base enclosing basement level. Levels 1 and 2 have been scaled, and modulated with large balconies to the front and create an articulated Facade. The proposed varied bi-folding Privacy screens will help to break up the entire Walter street Facade creating varied depths to the facade.

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 neighboring developments with the shadows cast fit within the anticipated shadows within the existing and future environment.

The proposed design with the large deep balconies enhance the linear form and create deep recesses with the top-level edges recessed further to minimize perceived bulk and scale. The layered building facades have been articulated and arranged to provide an appropriate scale when viewed from public Domain and neighbouring properties will have minimal visual impact. The building layered facade coupled with landscape design will complement the street and will set precedent for future appropriate scale along Walter street in the R3 zone.

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 density is appropriate for the site and existing context and future neighbourhood. The site's allowable FSR is 0.9:1, with an allowable gross floor area of 2203.48sqm. The proposal seeks to exceed the FSR control by approx. 6% to .94:1 generating GFA of 2309sqm of which excludes 96sqm to allow for the 4% affordable housing.

The development responds to the existing and future medium density character anticipated along Walter Street and responds to the market shortage demands in the locality.

The Development is well served by parks walk and Cycle ways, and utilizes existing infrastructure and transport nodes, with high frequency bus routes to Chatswood and the City center.

The density of the proposal is appropriate, with the residential units enjoying good internal amenity. Further, this density has been achieved with appropriate scaling and distribution of bulk of the building. The architectural techniques adopted in the design articulate the building, reducing its appearance contributes to the streetscape and surrounds, through improved public domain areas.

The proposed density is appropriate for the site and within the context of the area by virtue of its proximity to public transport, community facilities and business generally at immediate local area; of Willoughby; Crows Nest; St Leonards and Chatswood. The development provides for new residential accommodation comprising good internal amenity, in a location where there is a demand for such accommodation. The proposal will provide a mix of units suitable for singles, professionals and down sizers.

The proposal consists of 24 apartments with a unit mix of 7 x 1 bed, 20 x 2 bed and 2 x 3 bed apartments.

Please refer to schedule on Drawing no. A.001D.

The density achieved is considered to be appropriate within the Medium Density area under transition in which the site is located taking into account the controls, environmental and growing urban context in close proximity to facilities and public transport.

The proposed development comprises of 29 units, of which 13 i.e. 24%. Of Units range in size from a 50-55sqm 1bed and 68.9% are 75-90sqm two bedroom and 6.8% of units are 3bed and range from 108-145 sqm.

The proposed unit mix and density is appropriate to the existing demographic profile of Willoughby which is seen an increase in younger Professional population and those looking to down-size but remain in the area. The proposed Mix will meet the need for a diverse mix and range of residential accommodation.

The 14 adaptable units have been designed in accordance with the requirements of AS 1428 series, Building Code of Australia, DDA Access to Premises Standards and the Commonwealth Disability Discrimination Act.

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 proposed development will utilize passive solar design principles for climate control, which reduces the consumption of energy. This has been demonstrated by the fact that the proposed development achieves compliance with State Environmental Planning Policy. BASIX assessment has been carried out and a certificate forms part of this application. 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. A BASIX Certificate to this effect is attached under separate cover and forms part of the Development application.

Energy efficiency principles have been integrated throughout the design. Residential floor layouts have been designed such that majority of living areas and private open spaces are orientated to towards North, east and west.

The energy saving measures to be incorporated into the development are as follows:

- Thermally efficient construction including high performance materials has been used. The proposed building forms will be of masonry construction, assisting in the retention of heat in winter and keeping the interiors cool in summer.
- Shutters have been used Along 4 sides of the building facades to control the sun penetration in Summer and create appropriate privacy to private open spaces.
- Energy efficient appliances, fitting and fitments will be used such as toilets will be dual flush. Shower and kitchen taps are to be fitted with efficient fittings.
- The development reduces carbon footprint by use of high efficiency air conditioning; energy efficient appliances; fittings and services such as water reduction showerheads; dual flush toilets; gas cook tops; microwave ovens; and energy efficient hot water systems.
- A centralized waste collection area has been provided in the basement for Waste minimization and recycling easily accessible by all residents.
- Deep soil zones around the development allow for growth of mature deciduous trees which help to protect the building form harsh summer sun and in winter allowing the solar access to the development.

The Development has been sited and designed to maximize the number of units that receive solar access during mid-winter. The orientation of majority of living and private open spaces towards north, east and west means that the proposal will achieve 79.3% solar access and 93.1% cross ventilation.

Principle 5: Landscape

Good design recognizes 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 usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity, provides for practical establishment and long term management.

The proposed development integrates formal landscaped areas within deep soil zones around the perimeter of the site to soften the development when viewed from the public domain areas and neighbouring properties. The communal open space area has been located on the carpark entry platform along the eastern boundary outside the common room area. A total soft landscaped area of 1227sqm i.e. 50.1% of gardens and planters has been provided which will allow for opportunity of healthy large trees creating landscape buffer to adjoining properties and public domain areas.

Generally, the landscape design aims to:

- Provide visual amenity for residents
- Soften built form when viewed from rear properties and public domain areas
- Provide privacy screening to units and softening of the edges
- Provide species of low – medium water demands as well as deciduous plants and

trees to help with providing shade in summer and allowing solar access into the development in Winter months. All planters over car parking or on the last level will be 600mm above the SSL to provide sufficient soil Depth.

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.

The proposed development has been designed and orientated to maximize solar gain and cross ventilation. The proposal maximizes the amount of usable outdoor space, while minimizing bulk by appropriately scaled elements with varying setbacks. The proposed 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 neighbors.

Access is provided from the car park to all levels, with a 2 lifts enabling easy access for all age groups with different degrees of mobility.

The Acoustic privacy of residents is ensured through a combination of large balconies and laminated glassing and advanced seals to reduce street noise penetration to internal living and sleeping areas. The proposal reduces the transmission of noise from unit to unit and between floors by use of appropriate 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.

The proposed design provides a good amenity outcome for the residents and visitors. The considered areas incorporated:

- Well defined residential entry with ease of disabled access from Willoughby street including comfortable entry pathways and lobby for ease of mobility
- Lift access to all levels
- Unit and room sizes appropriate for intended use and comply with ADG guidelines
- Comfortable balcony and terrace proportions
- Orientation of units and living spaces to ensure visual; and acoustic privacy
- Providing maximum storage requirements within the units and provides any shortages with in the basement area for all units in secured lockup cages.

The development comprises 29 residential apartments with a mix of 7 x1 bed; 20 x 2 beds and 2X 3bed and includes 14 adaptable apartments (50%).

The development will achieve 79.3% solar access and 93.1% cross ventilation which are well over the minimum Sepp 65 Requirements.

A total of 38 cars & 2 motorbike spaces have been provided in a secure basement parking comprising of 29 residential spaces and 7 visitor spaces with 4 as the disable space. Additional residential storage is provided in the basement along with 6 Bicycle parking spaces. Apartments have a 2.7m minimum ceiling heights to all habitable areas. Ground floor apartments have ample private open space designed as court yards having part being covered by cantilevered balconies above.

Principle 7: Safety

Good design optimizes 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 maximize 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 development proposes a Single Secure Pedestrian access from Walter Street providing a clear straight link to the residential lobby with Video intercom provided to all units.

The proposed secure common entry from Walter Street will provide a safe entry for the occupants and the visitors. The lift will only allow access and can be called to via video intercom from each individual units.

The design of the development optimizes safety and security, both internal and from public domain areas. Safety and security has also been considered in accordance with CPTED principles of surveillance, access, and space management within the development.

The pedestrian entry point will be highly visible from both lower and upper external and internal areas of the development, common paths of travel and the public domain which will allow safe access and egress to the building. Controlled vehicular access to the building is provided by secure car park access from Walter Street, with direct access from the car park to the lift lobbies for residents, the audio intercom system at the main entry lobby, car park entry to communicate with residents and key card access for residents will ensure the safety and security of the development is maintained at all times.

The internal security of residents will be ensured through security gates on the basement car park entry with residential entry points well-lit along Walter Street, providing a safe well viewed and passive surveillance from apartments above. The development orientates the living and habitable spaces to 4 sides of the development maximizing passive surveillance of public communal areas.

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, providing opportunities for social interaction amongst residents.

Housing affordability in Sydney has become a primary focus in State politics. It has been outlined by NSW Planning that Sydney will need to increase the housing availability options, particularly within the existing urban areas and close proximity to the facilities and public transport.

The proposed development provides additional residential accommodation within an medium density residential area, which is located near public infrastructure. It does this in a manner that is sympathetic to its neighbors, contributory to its surrounds, and that is attractive to prospective occupants and purchases.

The proposal consists of 29 apartments:
7 x 1 beds, 20 x 2beds, and 2 X 3beds apartments.

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

The proposed unit mix and apartment sizes responds to the need of purchasers with differing budgets and housing requirements. 7 units are proposed which range in size from 50sqm-55sqm 1bed ; to 75-90sqm two-bed and 108-145sqm 3bed plus apartments.

Housing affordability in this market and location has become an issue which means that size of the apartments needs to respond to the need and affordability and the proposal seeks to respond to this requirement.

All levels within the development are accessible via lift access and comply with the access, mobility and discrimination code. The apartment mix reflects the diverse social mix within the Willoughby locality to sustain a vibrant and equitable community. Generous communal areas are provided on level ground between the 2 buildings as well as roof top common areas over both buildings promoting social interaction among residents through well-organized and balanced hard and soft landscaping to compliment and create a unified and integrated development setting great precedent for any future development along Walter street and immediate locality.

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 well-designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

The 4-5 storey proposal has steep site contours and has site constraints which have been dealt with by stepping the building to comply with the 12m height limit. Combination of new planting and public domain improvements will contribute to the existing and future character of the area. It is considered that diversity of apartments along with appropriate scale, forms and façade articulation appropriately responds to existing and future character of the locality and evolving future character of the neighborhood.

The building forms properly address the street frontage through orientation, the change of materials, color and create visual interest through appropriately scaled massing and varying setbacks. The elements break up the mass of the proposed development and provide an articulated façade when viewed from the neighboring sites and Public domain areas. The stepped building reduces building bulk and use of differing materials and colours visually connect and balance each part into a holistic approach.

The overall aesthetic is considered to be appropriately modulated and presents varied and visually interesting frontages along Walter Street respecting the slope of the site and the neighboring properties future opportunities.

The proposed development incorporates varied building elements, textures, materials and finishes which all contribute to an overall quality and aesthetically balanced building. The repeated building materials have been carefully chosen to break up parts and link elements together to create a unified building with balanced composition. The overall appearance of the building is in keeping with the desired future character of the area and will add to the rich variety of built forms.

Conclusion

Careful consideration has been given to the aims and objectives of SEPP No 65 and ADG and R3 zone objectives to achieve a high quality residential flat building that meets the needs of the immediate Locality of Willoughby manucipality.

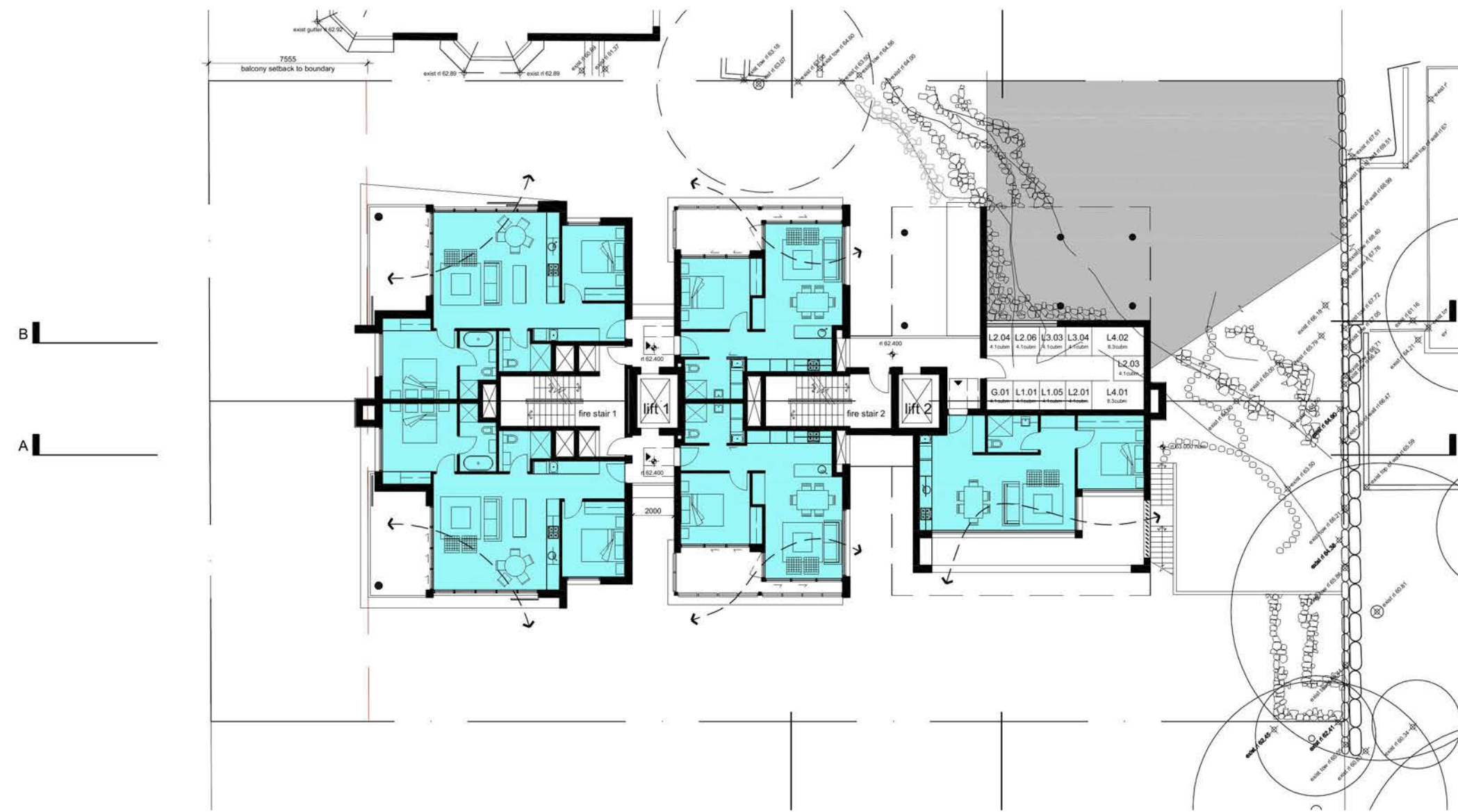
This development will contribute to the locality by:

- Defining the street edge and public domain improvements
- Provides Mix of housing choice in close proximity to Great facilities and Public transport
- Environmentally sustainable
- Meets the State and local urban planning policies for urban growth and consolidation
- Contributes to the streetscape and improves aesthetics of the Public Realm
- Will contribute to the neighborhood and Social aspect of Willoughby local area and will contribute to the existing and future anticipated character of the area.

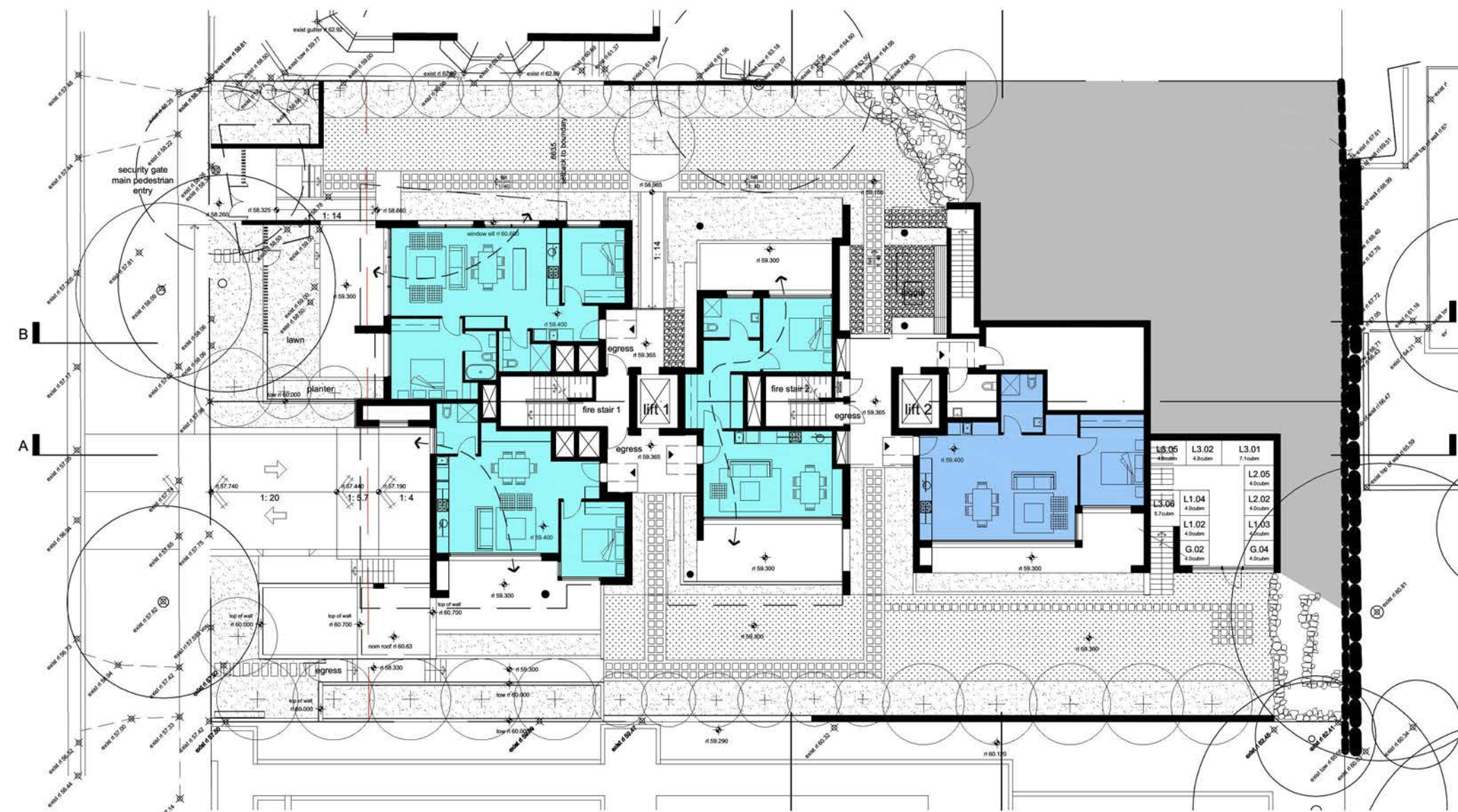
M. CHEHELNABI

RAIA Registration No: 7057

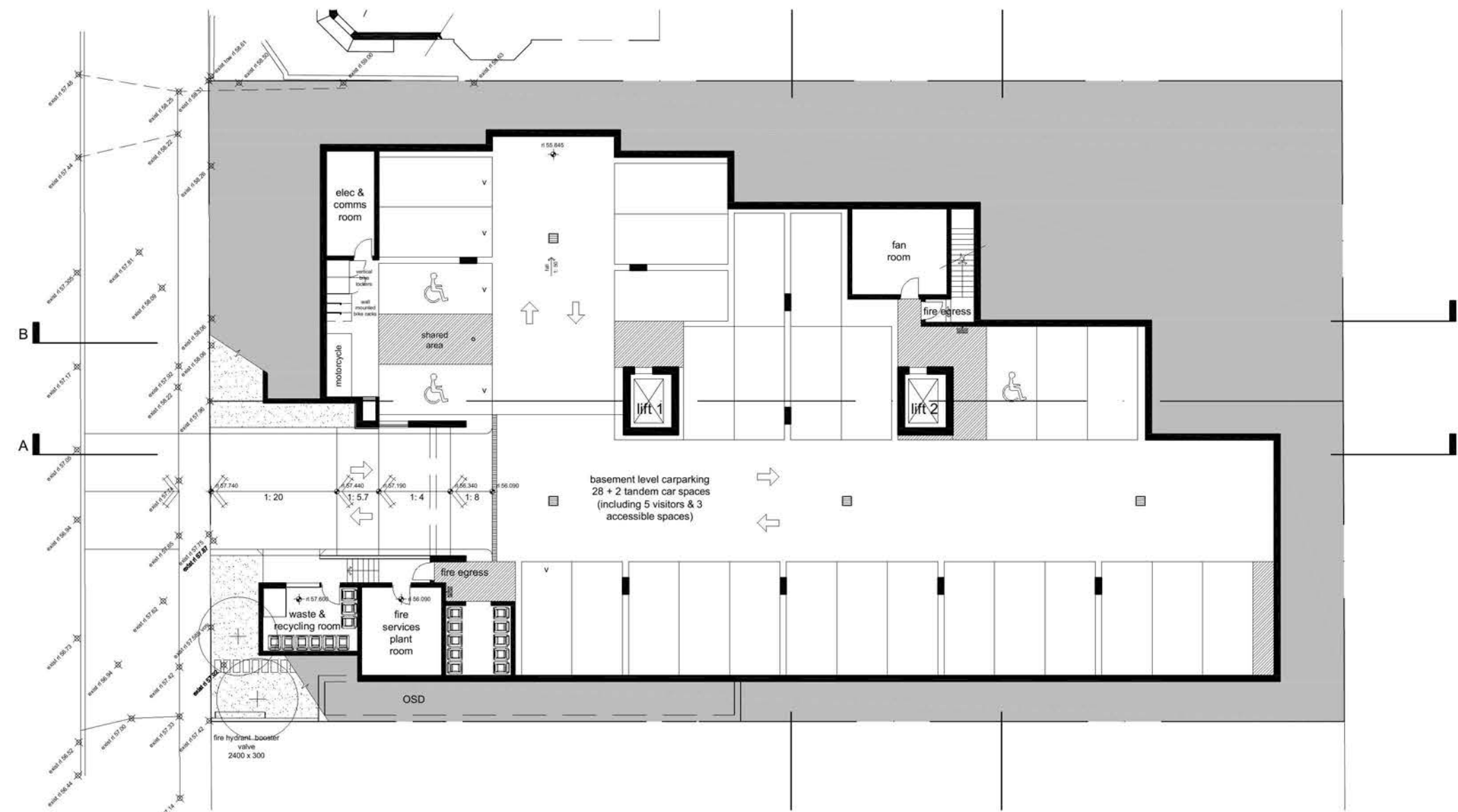
Architecte Urbaneia Pty Ltd



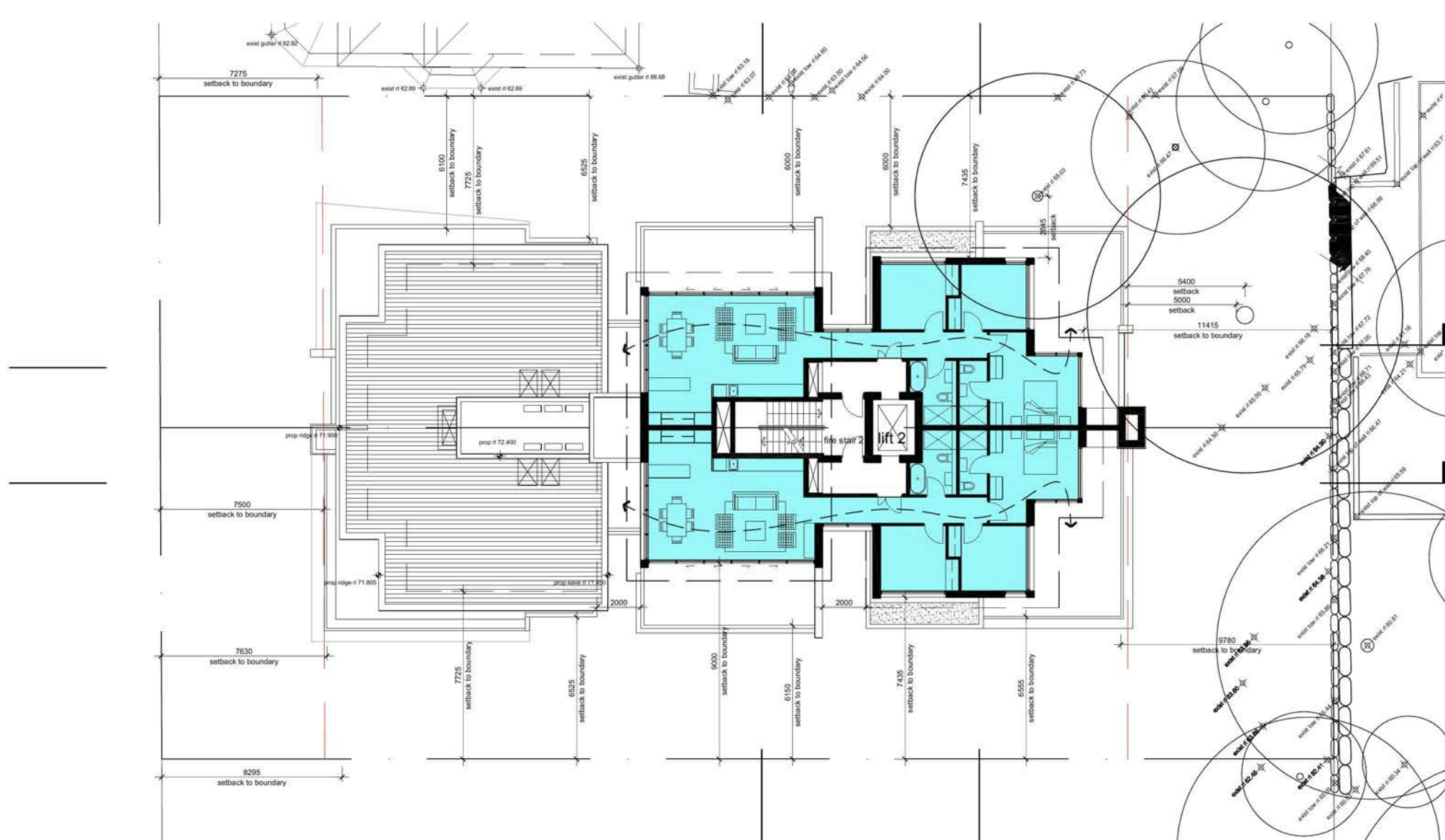
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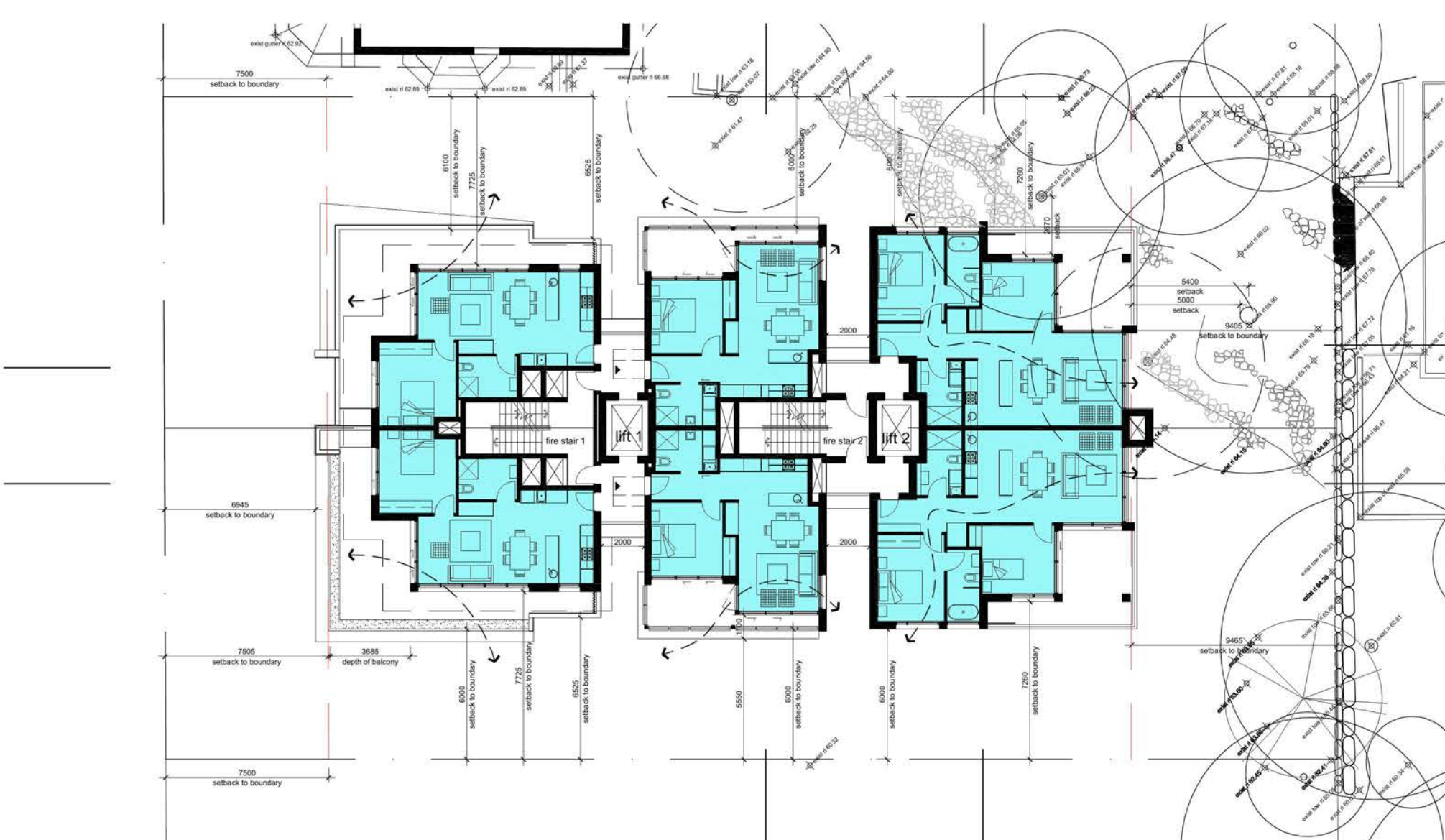
ground level



basement level



level 4



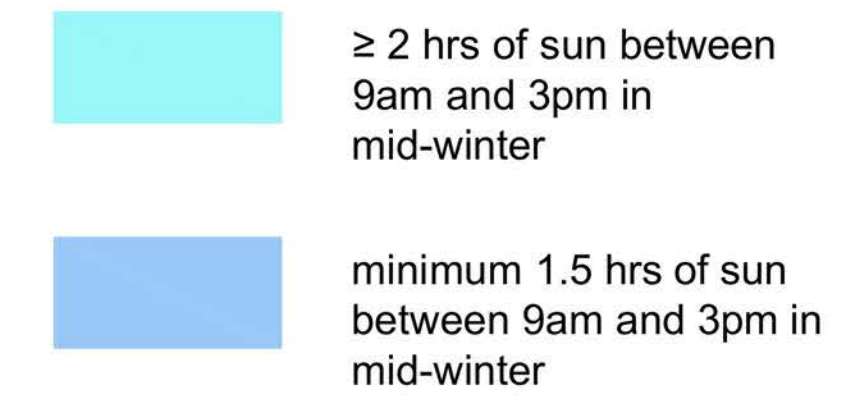
level 3



level 2

Solar/Daylight Access

living rooms and private open spaces for at least 70% of apartments in a development should receive a minimum of two hours direct sunlight between 9am and 3pm in mid-winter.



22 out of 23 apartments receives a min of 2hrs (96%);

1 out of 23 apartments receives a min of 1.5hrs (4%).

Cross Ventilated Apartments

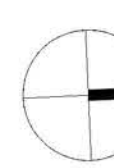
22 out of 23 apartments proposed are cross ventilated. (96% of the proposed development)

15 & 17 walter street
willoughby

lot 34 & 35, dp 1037751
proposed new residential multi-unit development
for
Pittmore Pty Ltd

apartment design guide
solar access & cross ventilation

Date: dec 2016
Dwg.No: 0749_DA_303
Scale: 1:250@A1, 1:500@A3



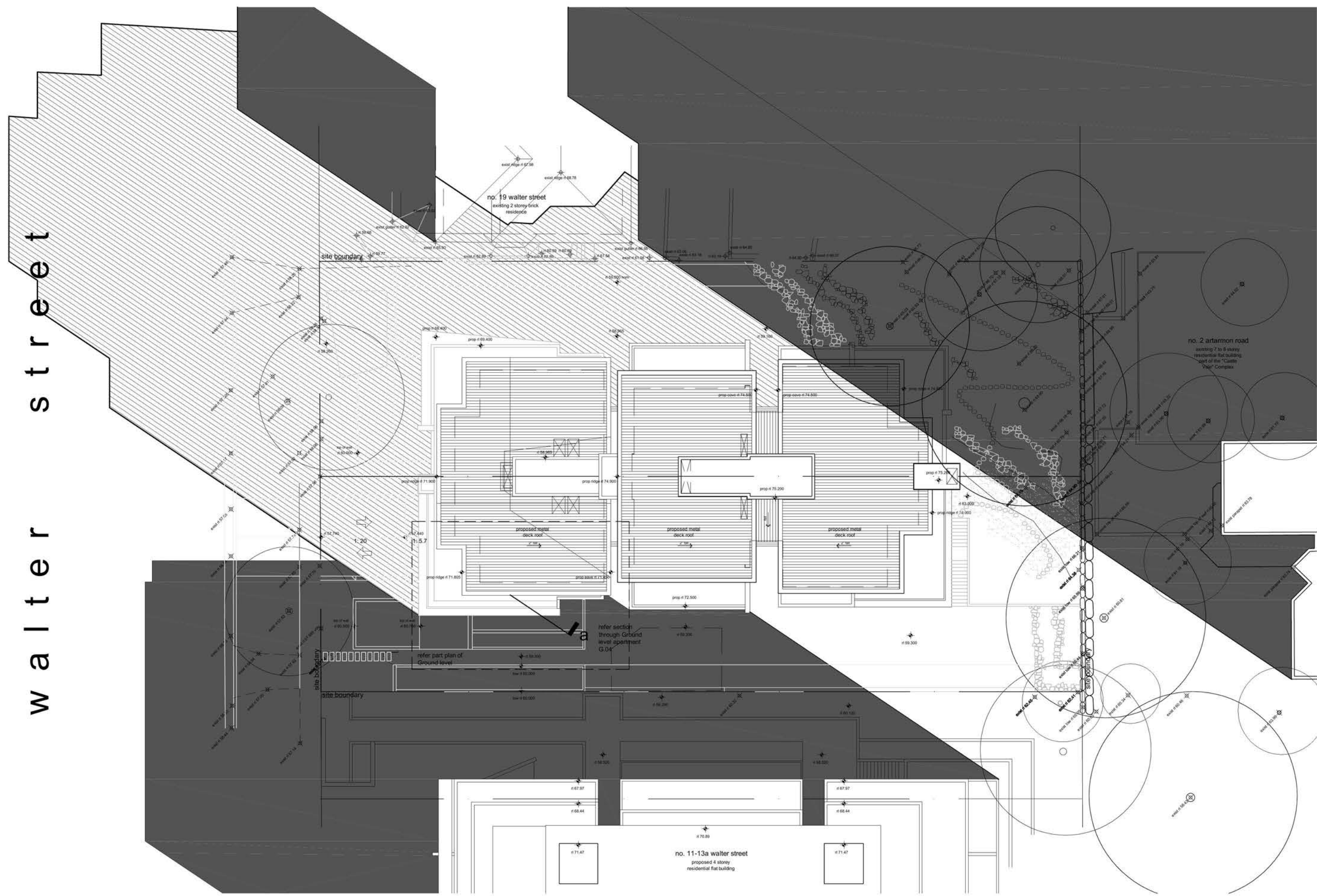
csquared architects pty ltd

registered architect grace chen 7396 abn 19 543 842 513

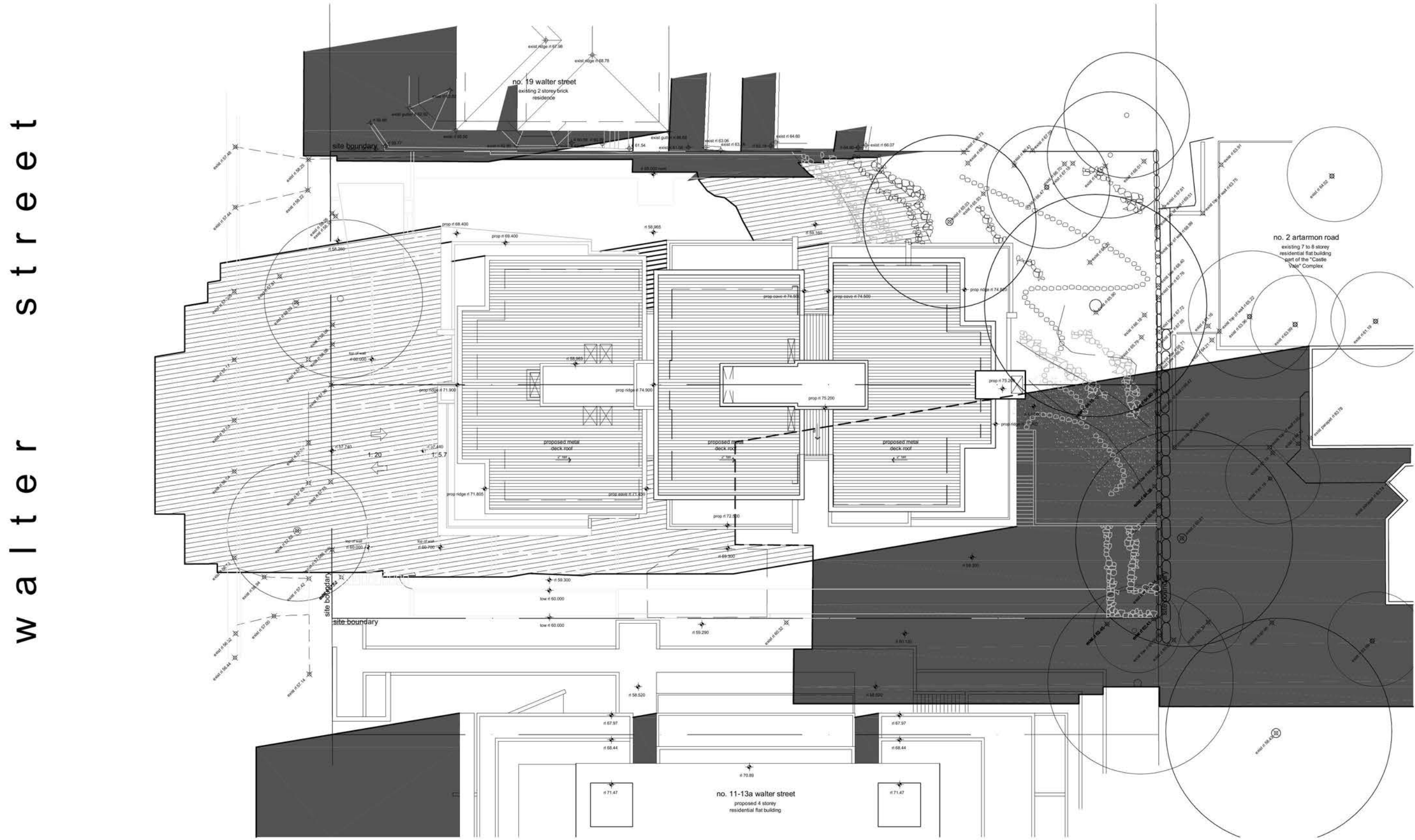
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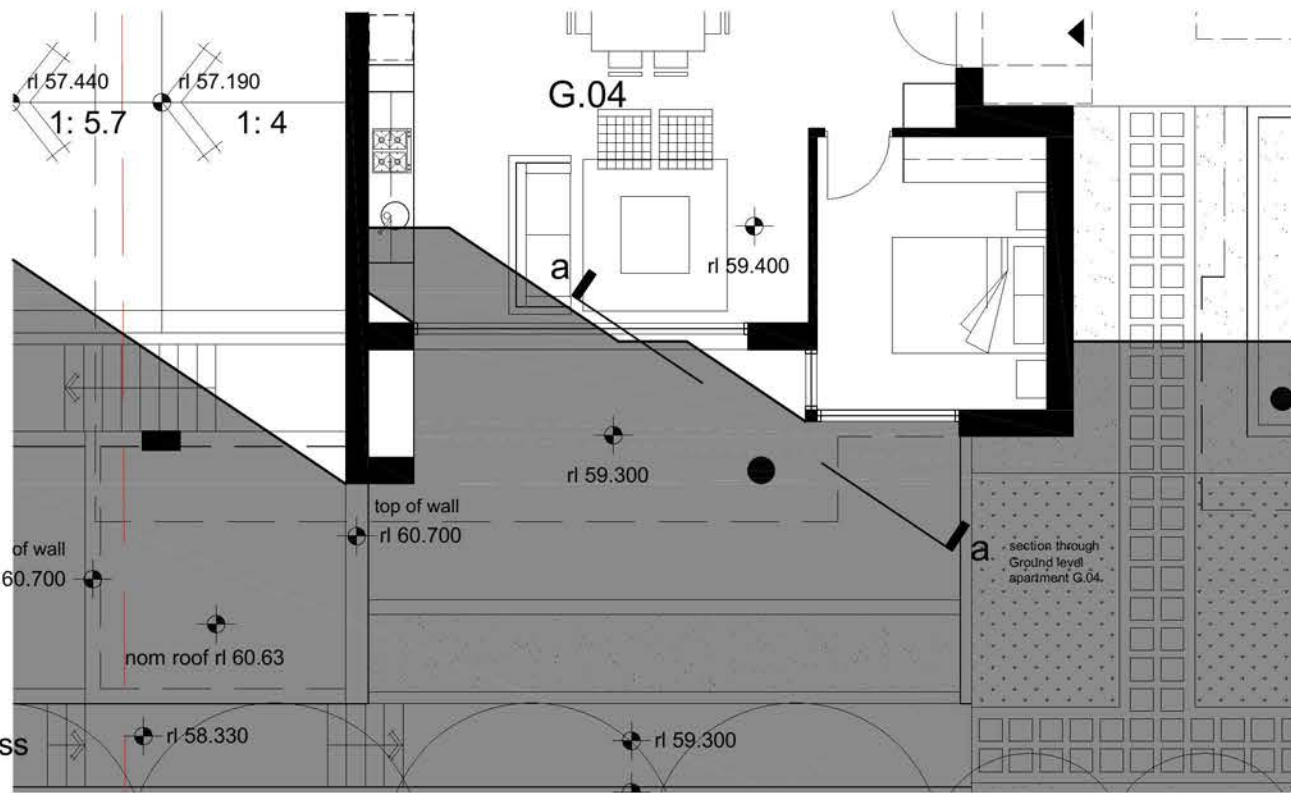
15 walter street, willoughby nsw 2068



9am, 21st june - planar shadow analysis

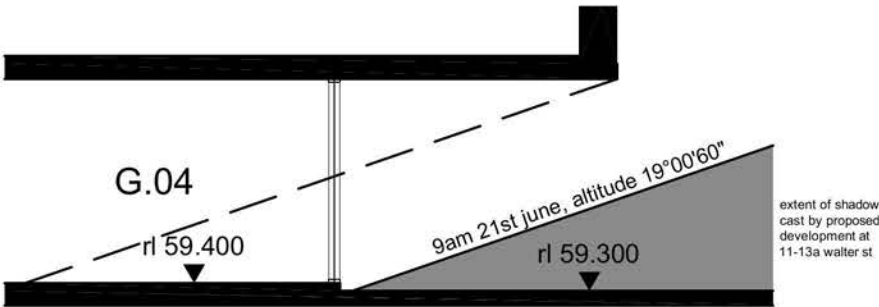


12 noon, 21st june - planar shadow analysis



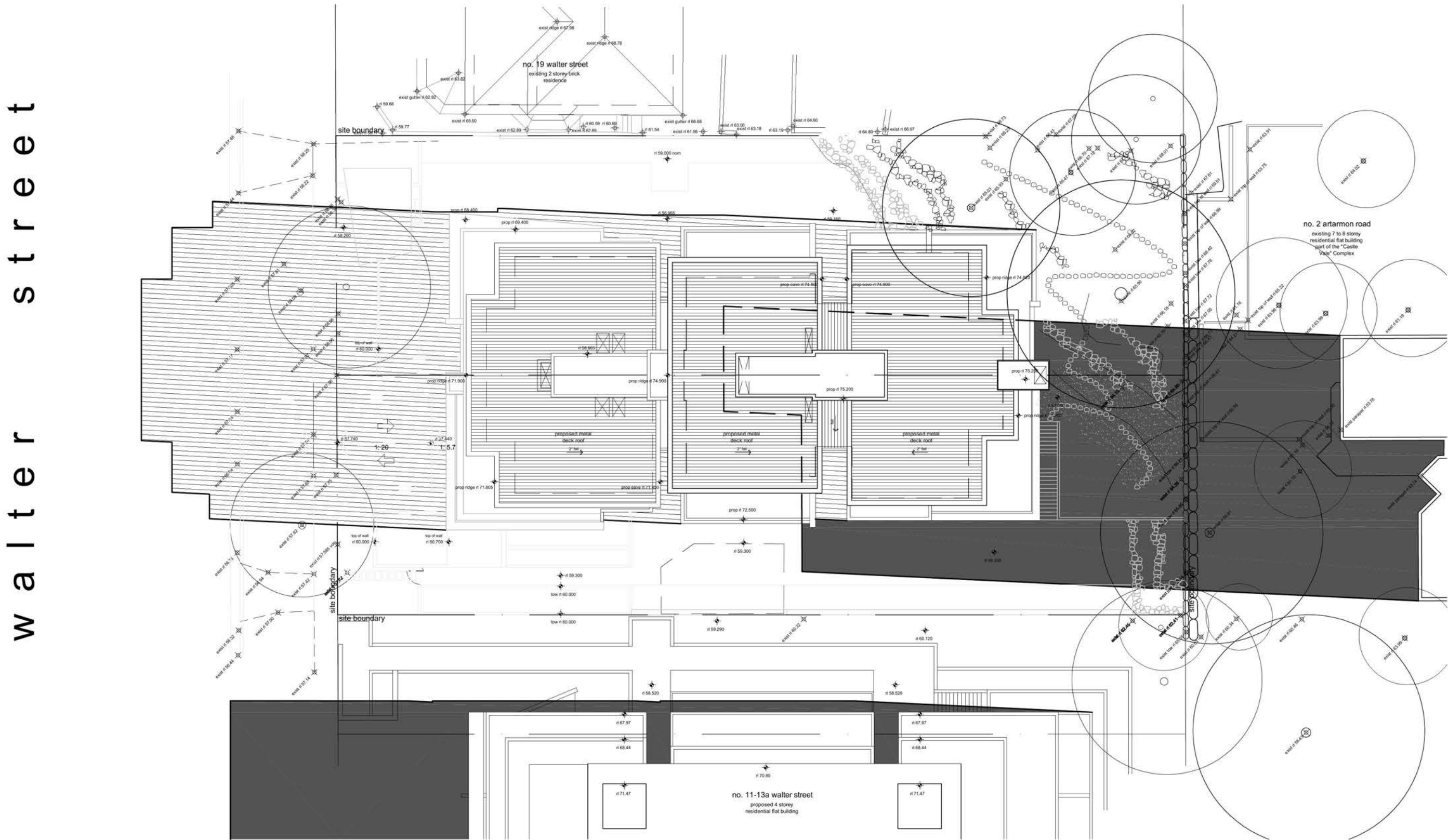
part Ground level plan

scale 1:100
analysis of solar access to G.04 at 9am from proposed residential unit development at 11-13a Walter Street



sectional shadow analysis

section a-a scale 1:100
sectional analysis of solar access to the living area and principal private open space of apartment G.04 at 9am from proposed residential unit development at 11-13a Walter Street



11.15am, 21st june - planar shadow analysis

- legend
- extent of shadow cast by existing building & structures
 - extent of shadow cast by proposed new building
 - shaded areas denote shadow impact from neighbouring buildings, existing or proposed

azimuth and altitude for shadows cast is extrapolated from the National Mapping Division's sunmoonposition program for Willoughby Lat -33°47'00" Long +151°12'00"				Date	Time	Azimuth	Altitude
				21/06/2016	09:00:00	42°32'29"	19°05'50"
				21/06/2016	11:15:00	11°21'57"	31°56'22"
				21/06/2016	12:00:00	359°11'20"	32°48'04"

Shadows are cast from height above ground where there are contour information and does not take into account any falls or rises beyond the perimeter

15 & 17 walter street
willoughby

lot 34 & 35, dp 1037751
proposed new residential multi-unit development
for
Pittmore Pty Ltd

shadow analysis, 21st june
sheet 1

Date: dec 2016
Dwg.No: 0749_DA_601
Scale: 1:250@A1, 1:500@A3



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