

SECTION-J REPORT

Proposed mixed use development

**52-62 MAY ROAD NARRAWEENA NSW 2099
(Lot-17 DP 801798)**

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LGA : Northern Beaches Council

DESIGN STATEMENT

Pursuant to NCC BCA A2.2; this report relies on supplied documentation for assessment in regards to adopting measures contributing to deemed-to-satisfy of designed and built deliverables. It is our opinion that the project can be constructed to satisfy the requirements of the NCC.

This report prepared from supplied materials for DA and CC purposes according to <http://tinyurl.com/p4s7df6>.

Lighting and a/c designs have not been sighted for review.



Ved Baheti B. Arch, M. Arch(UNSW) JP
Managing director

ABSA Assessor # 20901 | BDAV Assessor # 131521 | ACTPLA Assessor # 2011248

Document Control:

Rev	Date	Description
A	22/06/2020	Sec-J report prepared as per architectural drawings

Reference Document:

Rev	Date	Description
3	16/05/2020	Architectural Drawing by: Benson McCormack Architects Project Ref # 1853A Date: May 18 Drawing status: DA

Energy Efficiency

In response to concerns over global warming, the Australian Government announced in July 2000 that agreement had been reached with industry and State and Territory Governments to adopt a two-pronged approach to reducing greenhouse gas emissions from buildings. The first approach was the introduction of mandatory minimum energy performance requirements through the Building Code of Australia (BCA), and the second approach was the encouragement of best practice voluntary initiatives by industry. Industry was supportive of this two-pronged approach, taking the view that building-related matters should be consolidated in the BCA wherever possible.

Given the importance of the energy performance of buildings to overall national greenhouse gas emissions performance, the Australian Building Codes Board (ABCB) and the Australian Greenhouse Office signed a Memorandum of Understanding to jointly develop the BCA Energy Efficiency Provisions.

The Energy Efficiency Project was endorsed under the National Framework for Energy Efficiency (NFEE), an agreement between all Australian Governments established to improve energy efficiency. The objective of NFEE is to unlock the significant economic potential associated with increased implementation of energy efficiency technologies and processes to deliver a least cost approach to energy efficiency in Australia.

To enable the effective involvement of stakeholders in the development of the BCA Energy Efficiency Provisions, several committees and working groups comprising representatives from a range of government, industry and community organisations were developed.

At specific stages of the project, the ABCB sought the views of the wider community. This process was undertaken when the ABCB released the Directions Report on the Energy Efficiency Project (2001), and on the release of Regulation Documents (RDs) and Regulatory Impact Statements (RISs). Any proposed annual changes to the BCA are also made public prior to finalisation.

Energy efficiency requirements are now incorporated in the Building Code of Australia. In Volume 1, it is Section J, hence the "Section J Report".

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DESIGN CERTIFICATE TO THIS REPORT



SECTION J DESIGN CERTIFICATE

We certify that the design calculations contained in this report complies with NCC BCA A2.2(b).

Project: Proposed mixed use development
62 MAY ROAD NARRAWEENA NSW 2099
(Lot-17 DP 801798)

A handwritten signature in black ink, appearing to read "Ved Baheti", with a horizontal line underneath.

Ved Baheti B. Arch, M. Arch(UNSW) JP
Managing director

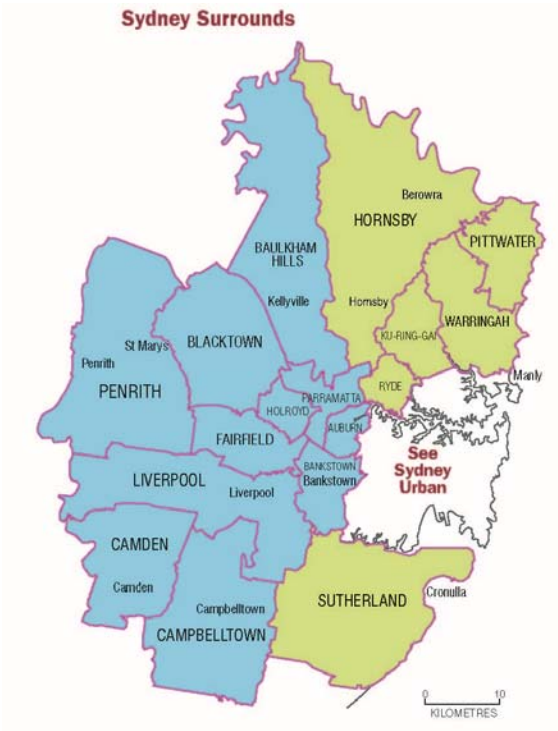
ABSA Assessor # 20901 | BDAV Assessor # 131521 | ACTPLA Assessor # 2011248

Section J review

Application

Retail / commercial	Section J affected
Basement carparking	Section J affected
Apartments	Section J affected Complements BASIX and NatHERS

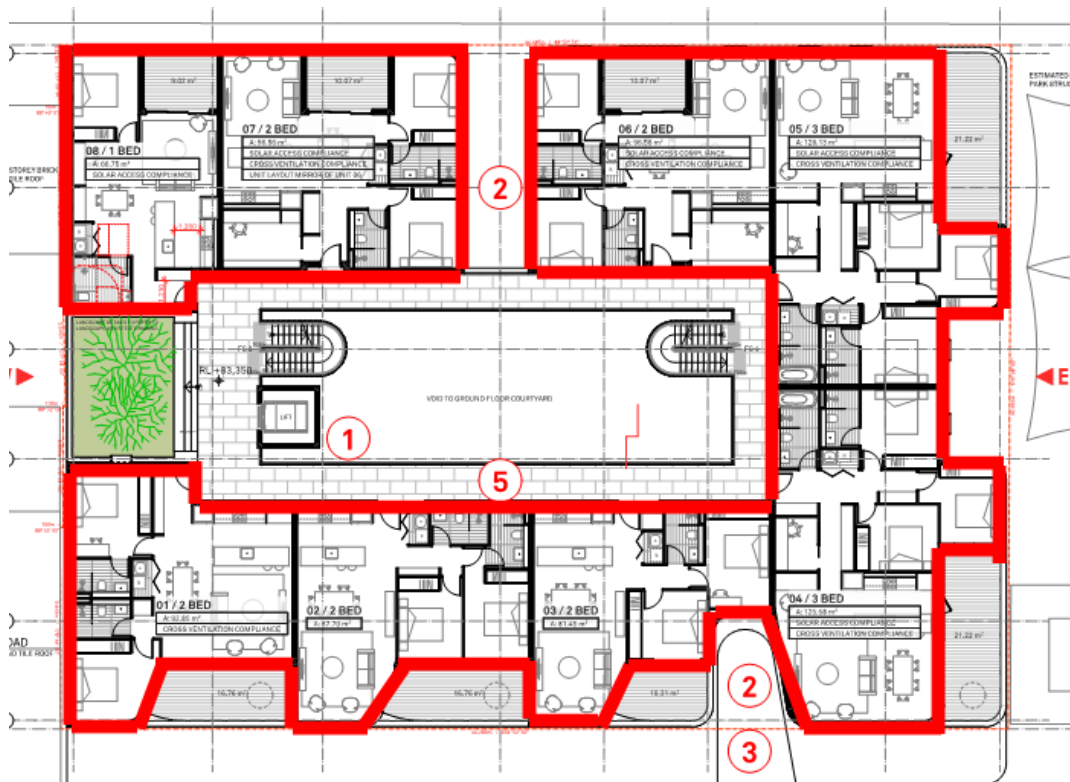
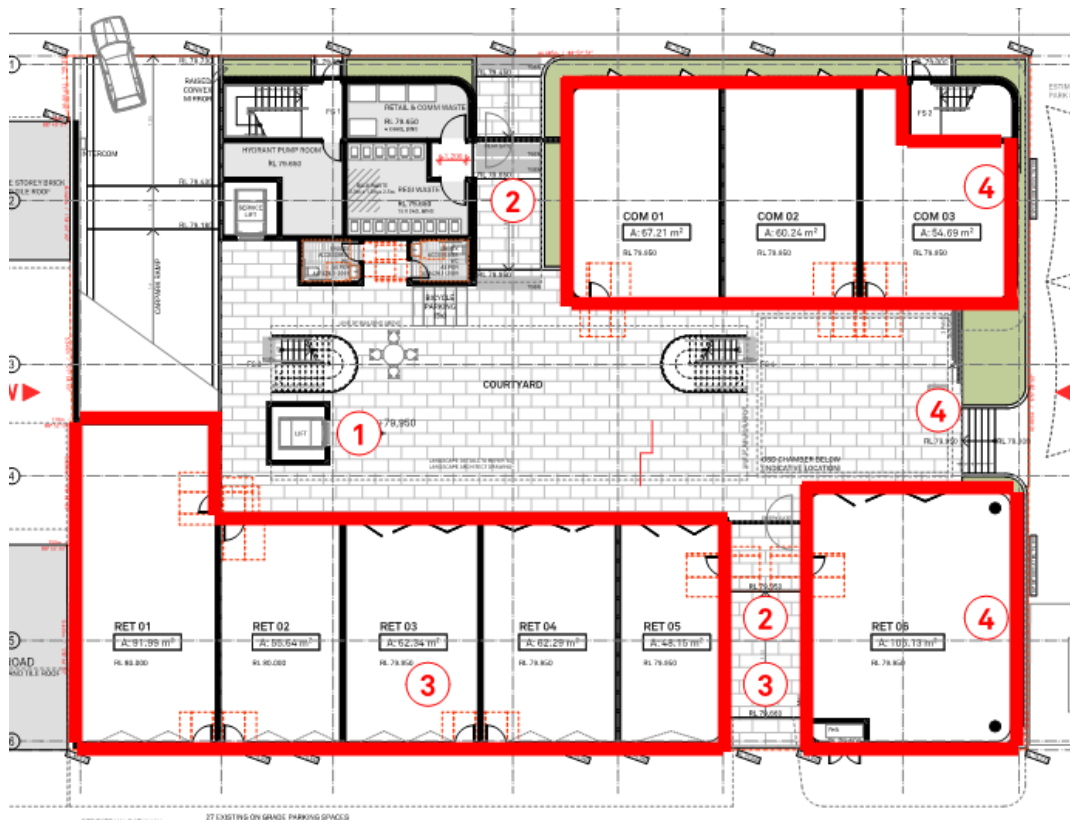
Climate Zone check

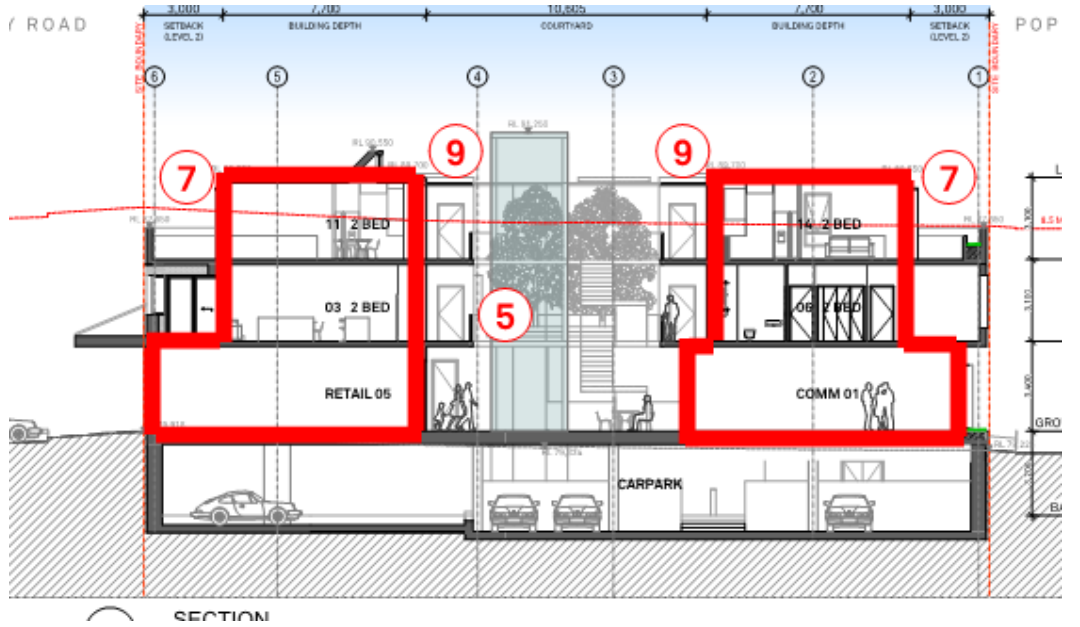
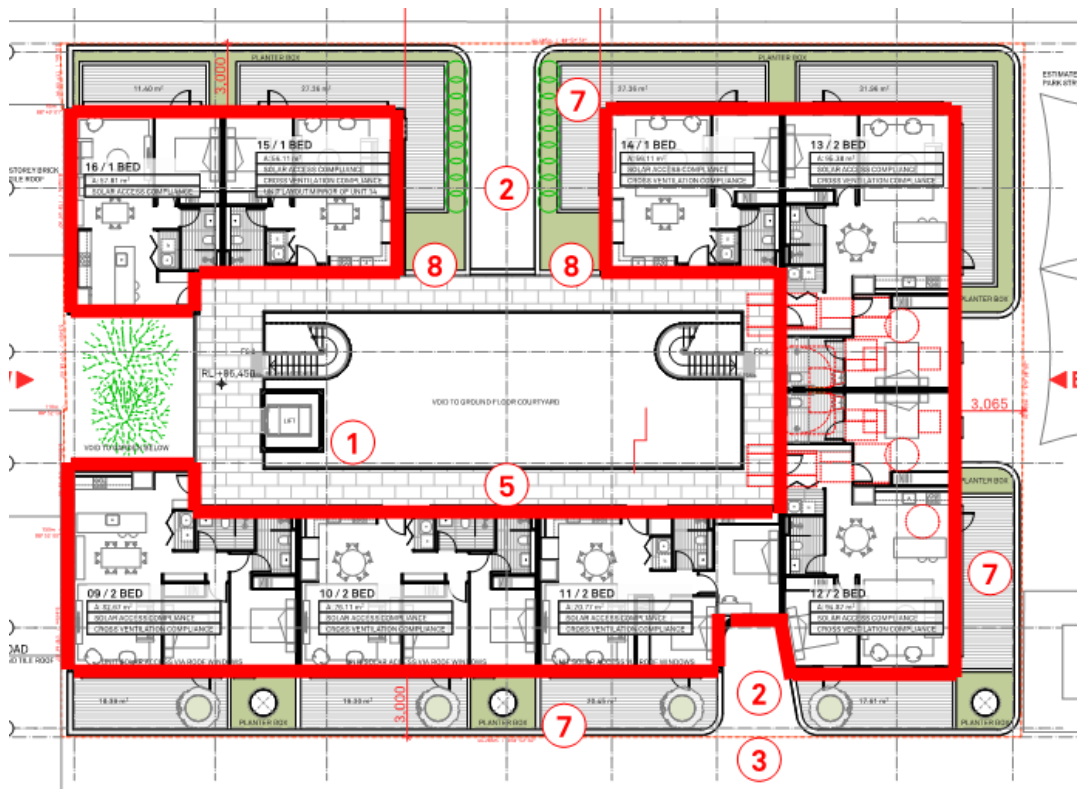


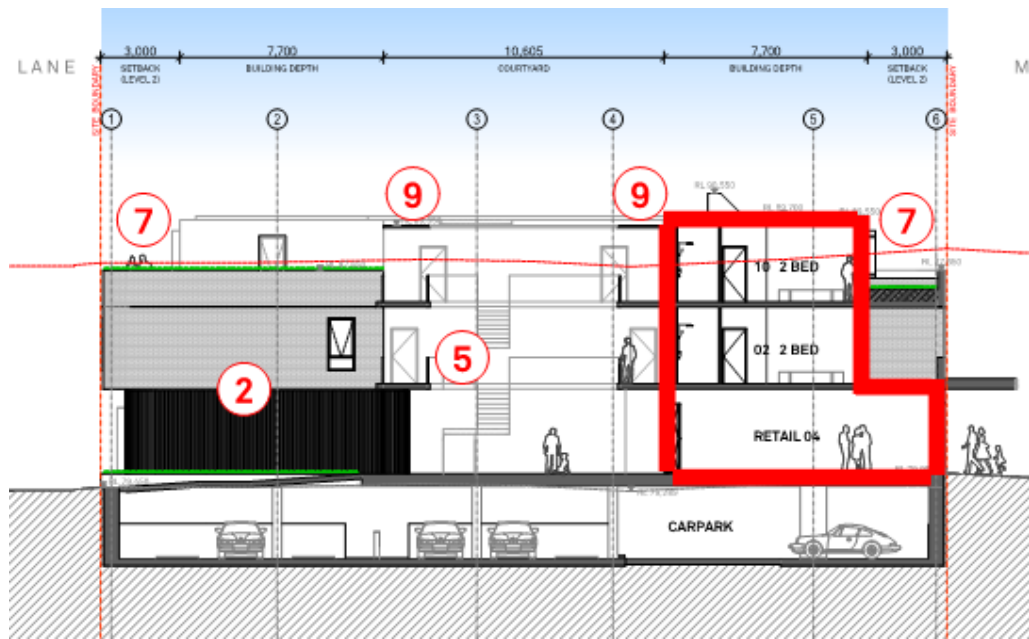
		Remarks
Climate zone:	5	White

Conditioned spaces (likely to be heated or cooled)

Space	Conditioned	Non-conditioned
Retail /commercial / apartments	X	-



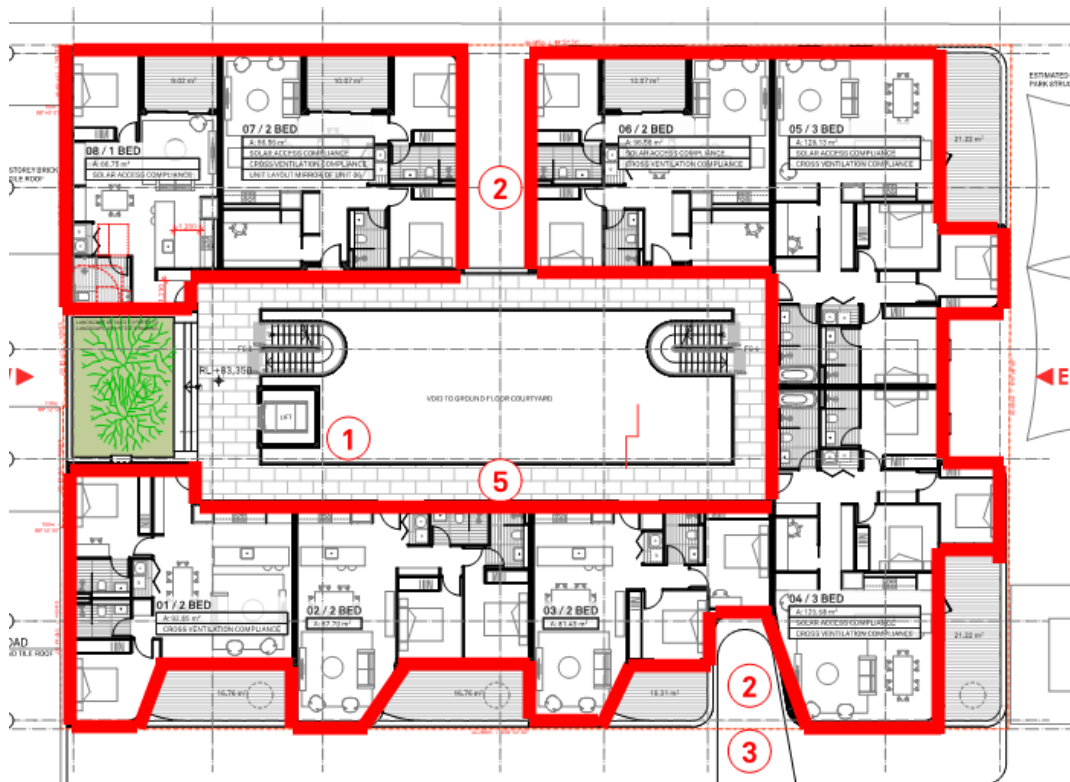
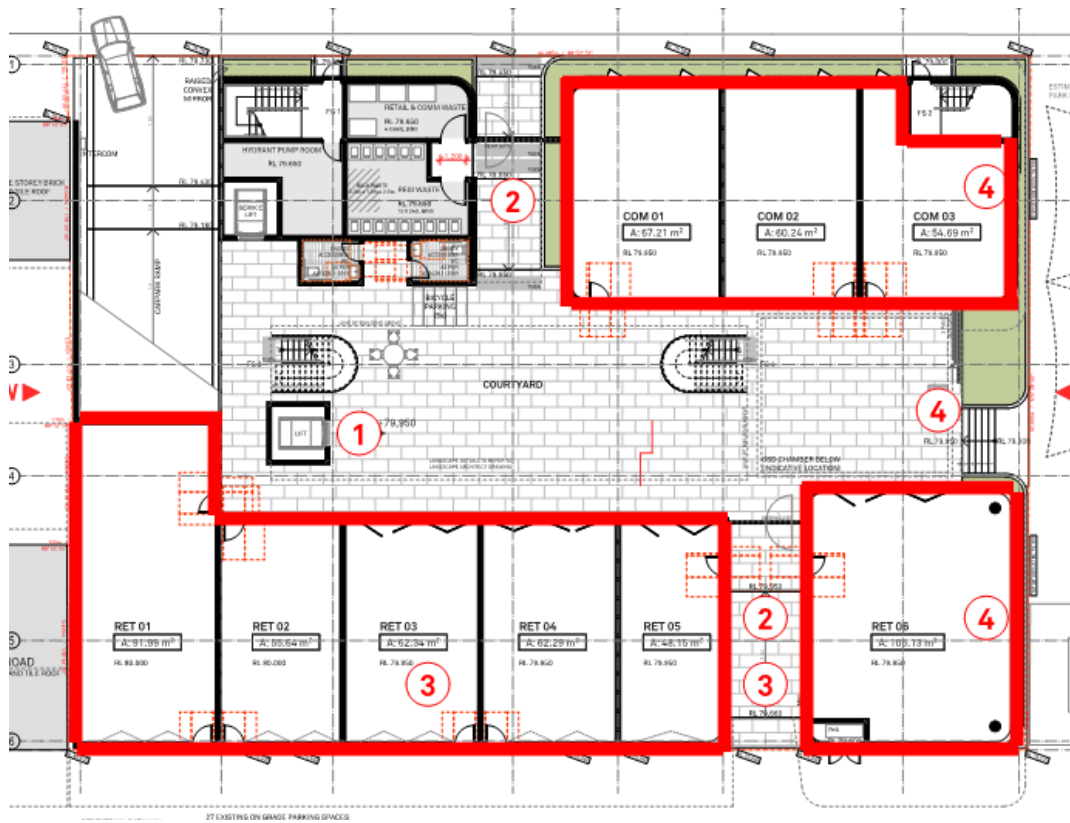


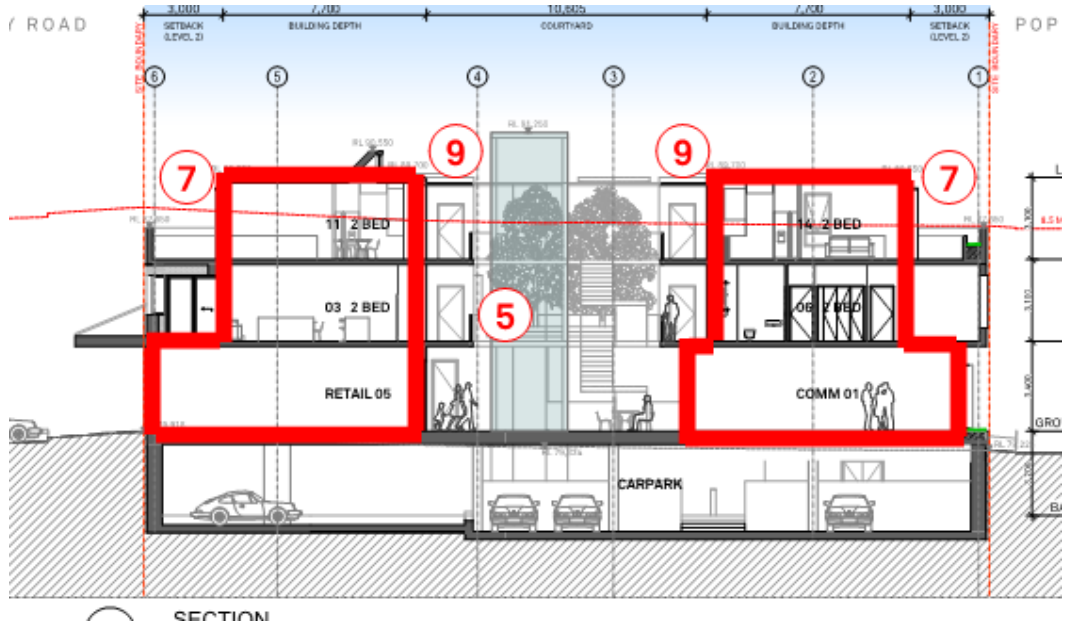
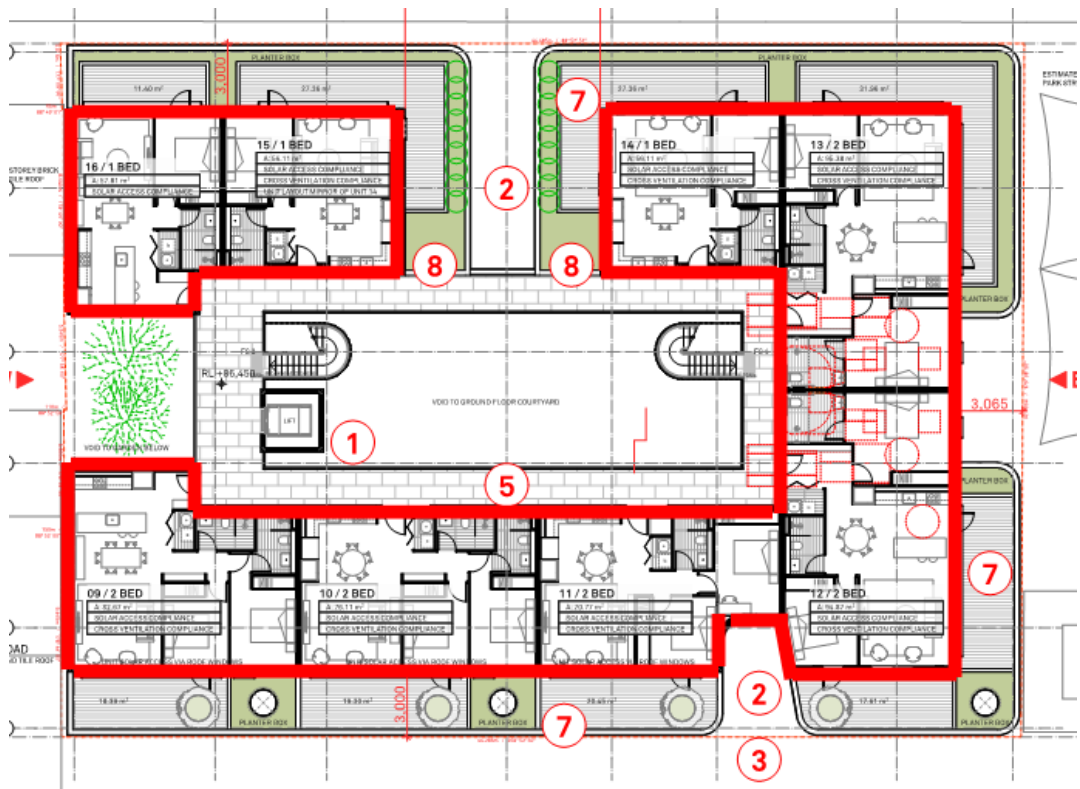


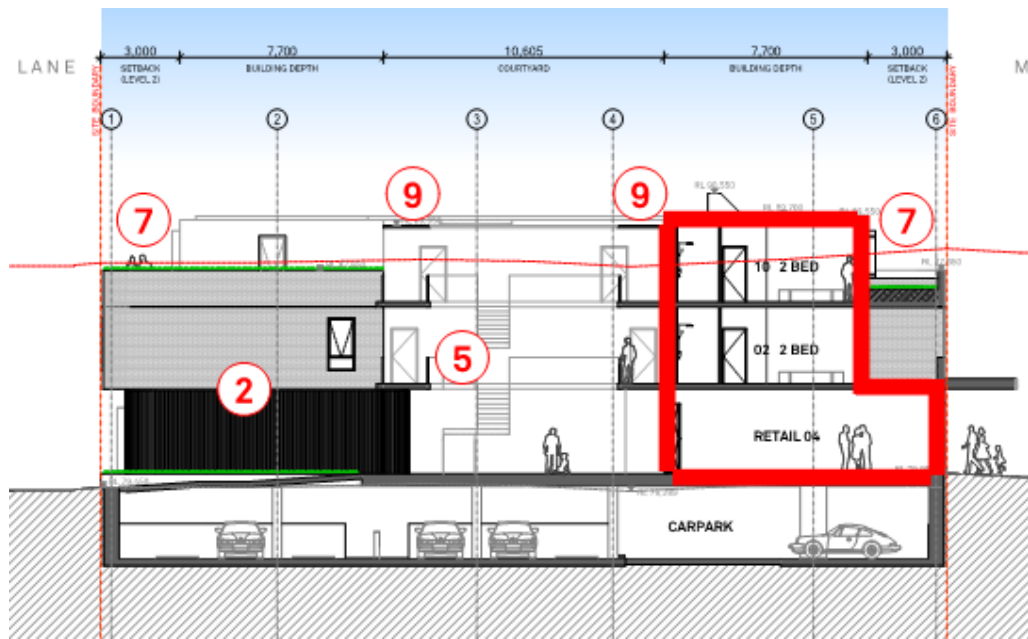
1. PART J1 BUILDING FABRIC

	Requirements	Provide evidence to PCA	Certifier action
J1.1 NSW J(A)1.1	BUILDING FABRIC Including Building Classes 2 and 4 Note: Section J complements BASIX	Applies	Note
J1.2	THERMAL CONSTRUCTION — GENERAL	Applies	
(a)	Compliance with AS/NZS 4859.1 Including that product branded with thermal performance	Applies	PCA must satisfy himself that the installation is compliant.
	abut or overlap adjoining insulation other than at supporting members such as studs, noggings, joists, furring channels and the like where the insulation must be against the member	Applies	PCA must satisfy himself that the installation is compliant.
	Form a continuous barrier with ceilings, walls, bulkheads, floors or the like that inherently contribute to the thermal barrier	Applies	PCA must satisfy himself that the installation is compliant.
	Installation does not affect the safe or effective operation of a service or fitting	Applies	PCA must satisfy himself that the installation is compliant.
(b)	Air space next to reflective surface	Applies	PCA must satisfy himself that the installation is compliant.
reflective insulation	Fit closely against any door or window opening Overlaps not less than 50 mm Tape all joins for air tightness	Applies	PCA must satisfy himself that the installation is compliant.
(c) Bulk insulation	Install to maintain position and thickness other than where it is compressed between cladding and	Applies	PCA must satisfy himself that the installation is compliant.

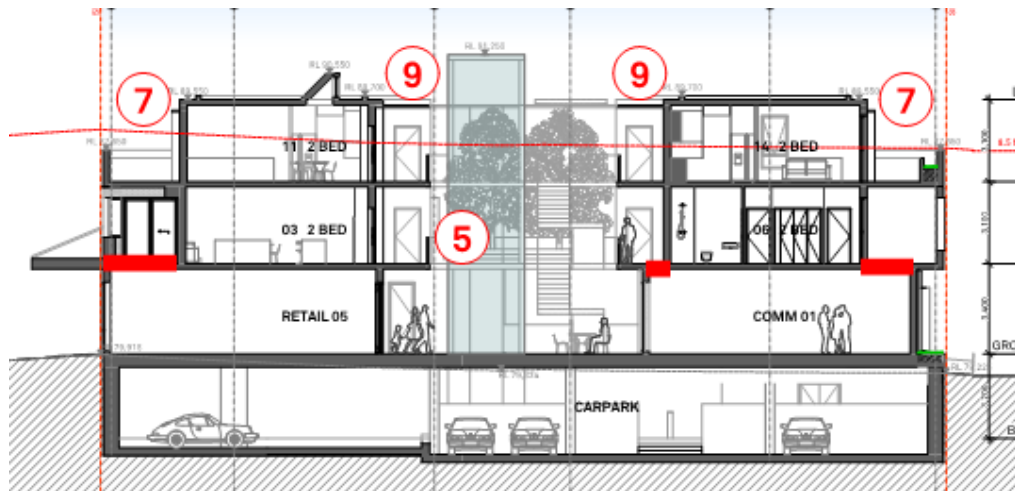
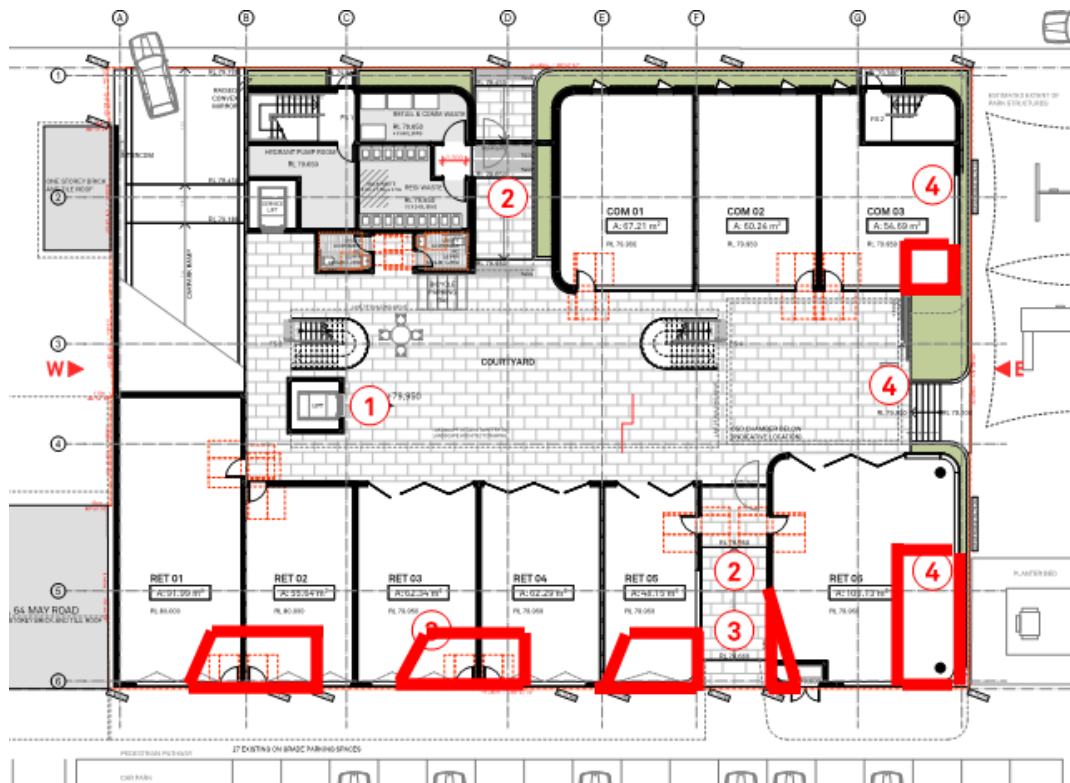
	Requirements	Provide evidence to PCA	Certifier action
	supporting members, water pipes, electrical cabling or the like In a ceiling, where there is no bulk insulation or reflective <i>insulation</i> in the wall beneath, it overlaps the wall by not less than 50 mm		
(d)	Roof, ceiling, wall and floor materials, and associated surfaces are deemed to have the thermal properties listed in Specification J1.2	Applies	PCA must satisfy himself that the installation is compliant.
(e)	The <i>required Total R-Value</i> and <i>Total System U-Value</i>, including allowance for thermal bridging, must be calculated in accordance with AS/NZS 4859.2 for a roof or floor; or determined in accordance with Specification J1.5a for <i>wall-glazing construction</i>, or determined in accordance with Specification J1.6 or Section 3.5 of CIBSE Guide A for soil or sub-floor spaces.	Applies	PCA must satisfy himself that the installation is compliant.

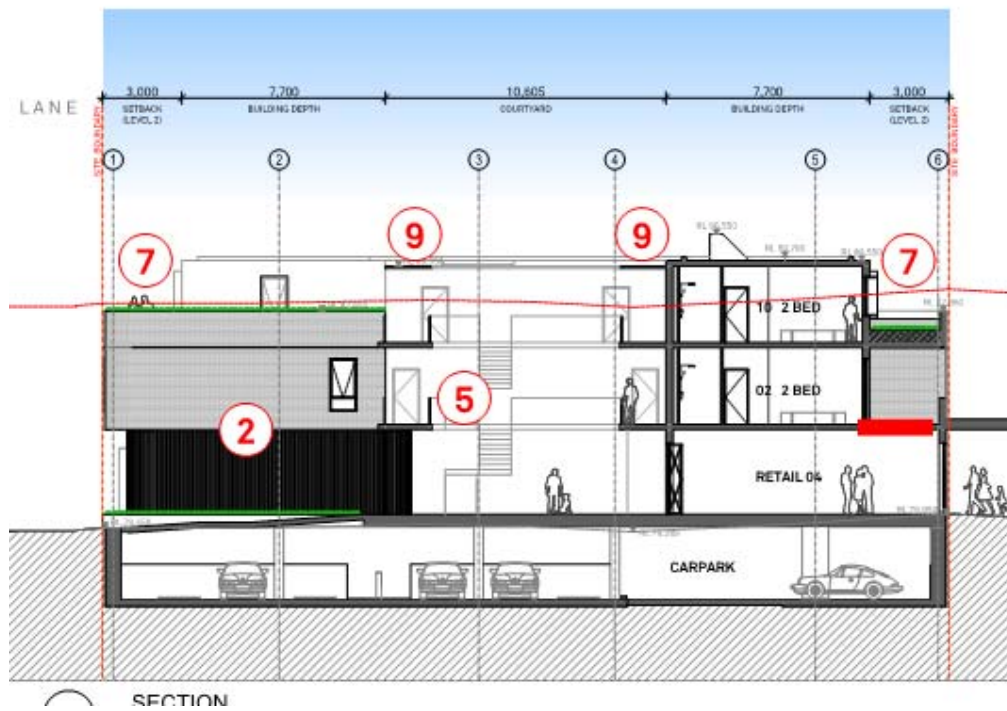






	Requirements	Provide evidence to PCA	Certifier action
J1.3	ROOF AND CEILING CONSTRUCTION		
(a) Climate zone 5:	achieve a <i>Total R-Value</i> greater than or equal to R 3.7 downward heat flow	Provide R 3.0 between roofing and ceiling	PCA must satisfy himself that the installation is compliant.
Climate zone 6:	achieve a <i>Total R-Value</i> greater than or equal to R 3.2 downward heat flow Tiled and metal roofing R 0.56	Not applicable	Note
(b) Climate zone 6	Solar absorptance of the upper surface of a roof must be not more than 0.45.	Not applicable	Note





		Provide evidence to PCA	Certifier action
J1.4	ROOF LIGHTS		
(a)	not more than 5% of the floor area of the room or space served	Not applicable	Note
(b)	< 3% floor area Light shaft index <1.0: SHGC <0.45 U<3.9 Light shaft index 1.0<2.5: SHGC <0.51 U<3.9 Light shaft index >2.5: SHGC <0.76 U<3.9	Not applicable	Note
	3%<5% floor area Light shaft index <1.0: SHGC <0.29 U<3.9 Light shaft index 1.0<2.5: SHGC <0.33 U<3.9 Light shaft index >2.5: SHGC <0.49 U<3.9	Not applicable	Note
		Provide evidence to PCA	Certifier action
J1.5	WALLS AND GLAZING		
(a)	Total System U-Value of wall-glazing construction		
	Class 2 common area, a Class 5, 6, 7, 8 or 9b building or a Class 9a building <U-2	Refer calculations below	PCA must satisfy himself that the installation is compliant.

		Provide evidence to PCA	Certifier action
Climate Zone 5	for a Class 3 or 9c building or a Class 9a ward area U-2.0	Not applicable	Note
Climate Zone 6	for a Class 3 or 9c building or a Class 9a ward area <U-1.1	Not applicable	Note
(b)	Display glazing <U-5.8 shopfronts	Not applicable	Note
(c)	<i>Total System U-Value of wall-glazing construction</i> must be calculated in accordance with Specification J1.5a		Note
(d) Climate zone 5	Wall area >80% or more of wall-glazing construction area Class 2 common area, Class 5, 6, 7, 8 or 9b building or a Class 9a building wall Total R-Value >R-1.4	Refer calculations below	PCA must satisfy himself that the installation is compliant.
Climate zone 5	Wall area >80% or more of wall-glazing construction area Class 3 or 9c building or Class 9a ward area wall Total R-Value >R-1.4	Not applicable	Note
(d) Climate zone 6	Wall area >80% or more of wall-glazing construction area Class 2 common area, Class 5, 6, 7, 8 or 9b building or a Class 9a building	Not applicable	Note

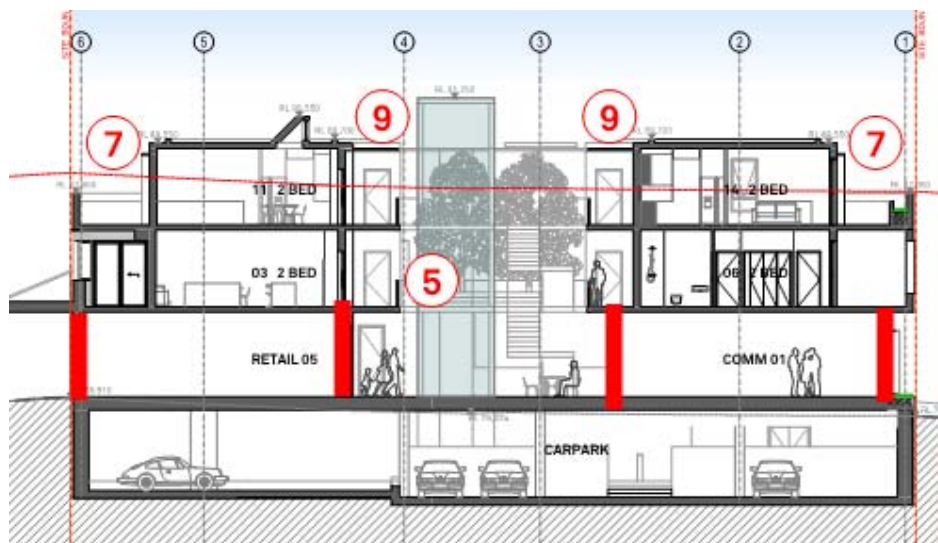
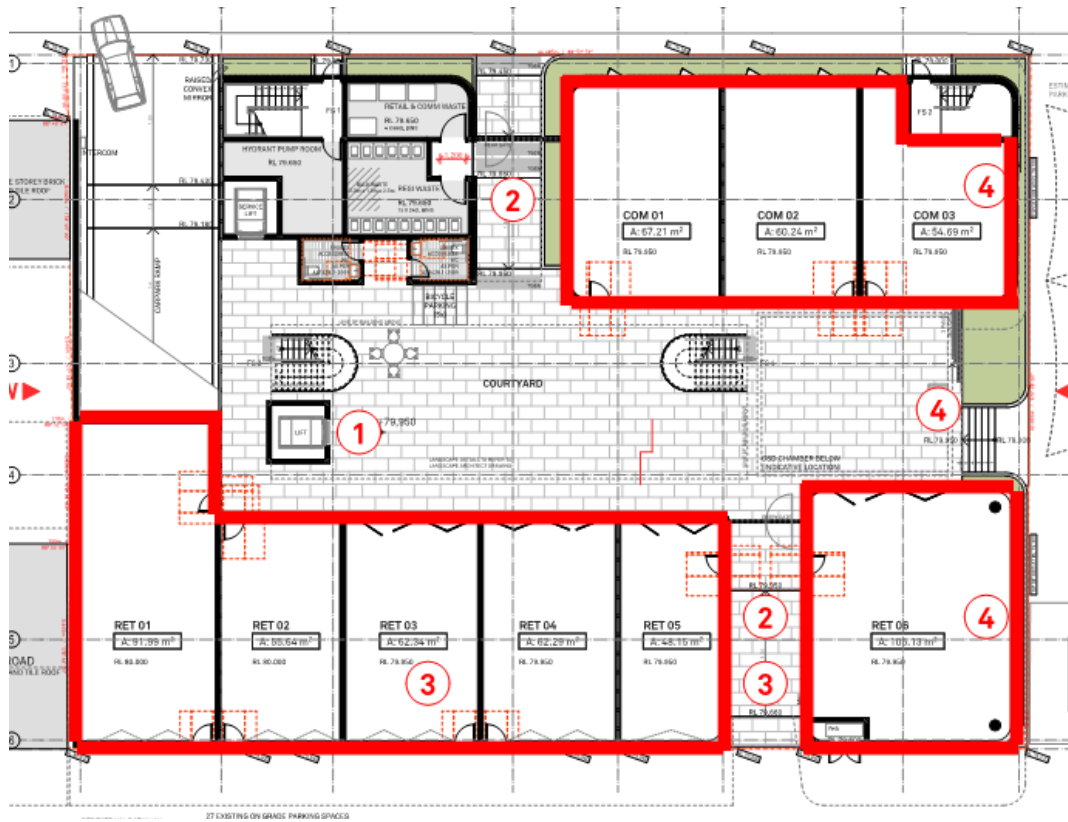
		Provide evidence to PCA	Certifier action
	wall Total R-Value >R-1.4		
Climate zone 6	Class 3 or 9c building or Class 9a ward area wall Total R-Value >R-2.8	Not applicable	Note
(e) Climate zones 5 and 6	Wall area <80% or more of wall-glazing construction area Class 2 common area, Class 5, 6, 7, 8 or 9b building or a Class 9a building wall Total R-Value >R-0.13	Refer calculations below	PCA must satisfy himself that the installation is compliant.

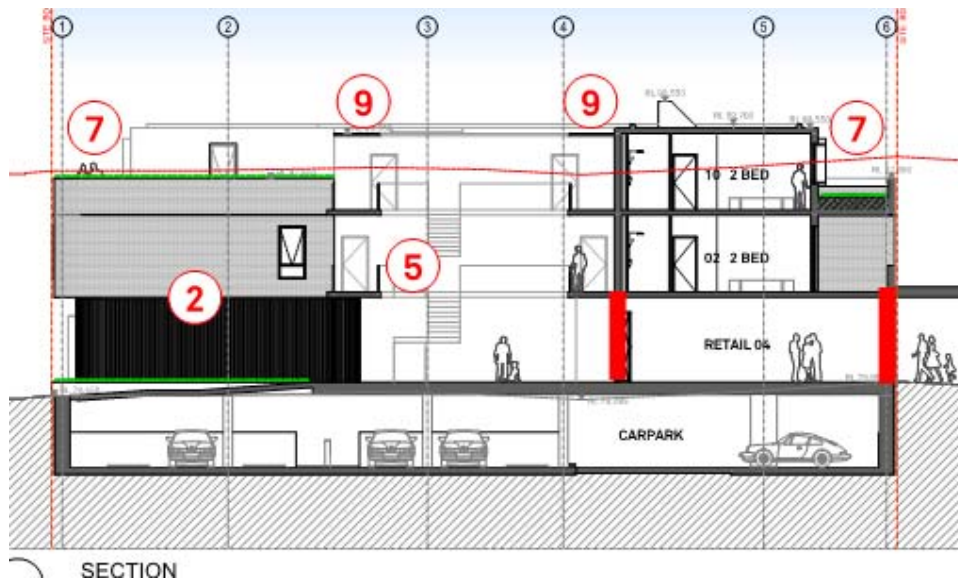
BRICK VENEER WALL + R 2.5 insulation

		R	
1	outside air	0.04	
2	110 brick	0.09	
3	Cavity air	0.17	
4	insulation	2.50	
5	plasterboard	0.06	
6	Inside air	0.12	
	TOTAL	2.98	

257	AWS-011-11	RESIDENTIAL SERIES 541/542 SLIDING DOOR -SINGLE GLAZED	6mm Evantage Grey	SD	4.5	0.35	0.28
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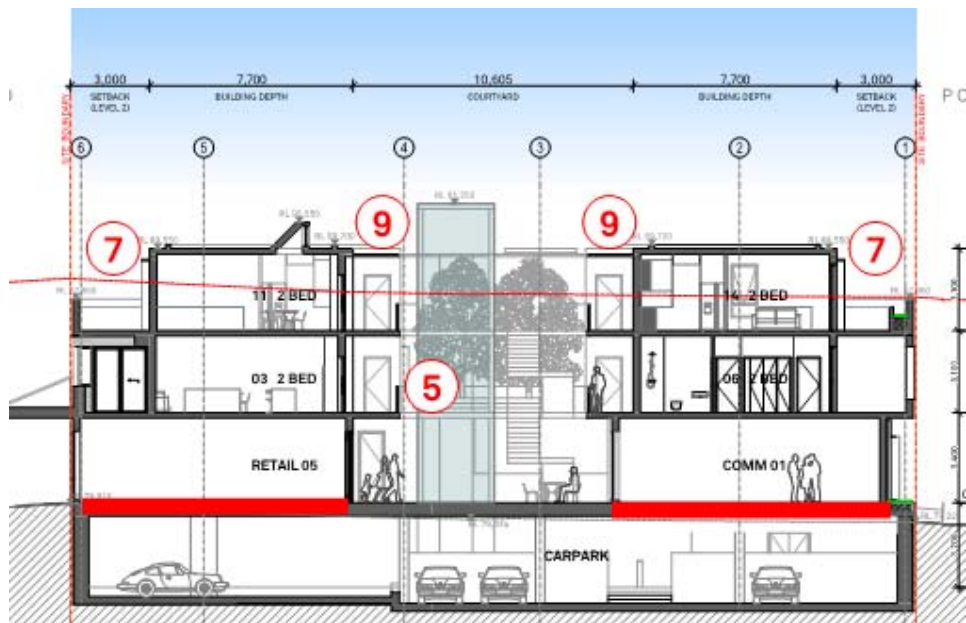
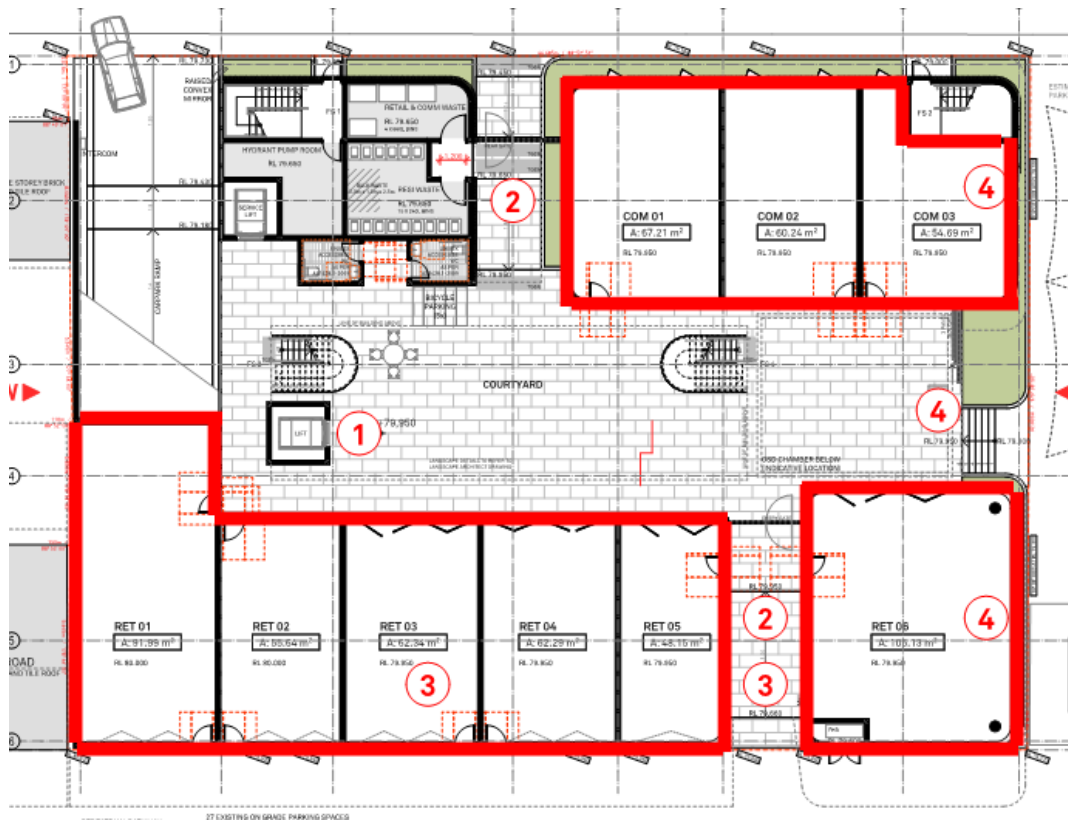
NCC 2019 Glazing calculator									V1.7-20200408				
Project Name	Deemed to satisfy with single glazed Evantage Gey								Wall R-value				
Building Class	6		Class 2,3,5,6,7,8,9a, 9c, ward							total A	total A x Rt	R_avg	
Climate Zone	5		Storey	ground					N	101.9	303.662	2.98	
Wall+glazing U-value max limit	2.0								E	48.8	145.424	2.98	
		N	E	S	W				S	108.5	323.33	2.98	
Solar Admittance max limit	0.13	0.13	0.13	0.13					W	124.8	371.904	2.98	
Proposed wall R-value	2.98	2.98	2.98	2.98									
	Method 1				Method 2					Glazing total A	Wall-glazing total A		
	N	E	S	W	Combined				N	72.2	174.1		
Wall+glazing area	174.1	99.2	188.8	124.8	586.9				E	50.4	99.2		
Glazing area	72.2	50.4	80.3	0.0	202.9				S	80.3	188.8		
percentage	41%	51%	43%	0%	35%				W	0.0	124.8		
Proposed Wall U-value	0.34	0.34	0.34	0.34	0.34								
Proposed Wall+Glazing U-value	2.06	2.45	2.11	0.34									
Proposed Wall+Glazing Solar Admit	0.115	0.178	0.107	0.000									
	Reference combined SHGC Energy Value												
	Proposed combined SHGC Energy Value												
Element	Facing	Height	Width	Area	U-value	SHGC	P	H	INPUT Wall components only - Area and R- value for each wall type on each façade				
Com 01	N	2.40	0.90	2.2	4.50	0.35	1	3.2	Wall elements	Face	A	Rt	A x Rt
Com 02	N	2.40	0.90	2.2	4.50	0.35	1	3.2	BV	W	124.80	2.98	371.904
Com 02	N	2.40	0.90	2.2	4.50	0.35	1	3.2	BV	N	101.90	2.98	303.662
Com 03	N	2.40	0.90	2.2	4.50	0.35	1	3.2	BV	S	108.50	2.98	323.33
Com 03	N	2.40	0.90	2.2	4.50	0.35	1	3.2	BV	E	48.80	2.98	145.424
Ret 06	N	2.60	8.80	22.9	4.50	0.35	1.5	3.2					0
Ret 05	N	2.60	4.00	10.4	4.50	0.35	1.5	3.2					0
Ret 04	N	2.60	5.40	14.0	4.50	0.35	1.5	3.2					0
Ret 03	N	2.60	5.40	14.0	4.50	0.35	1.5	3.2					0
Ret 01	S	2.60	5.30	13.8	4.50	0.35	2.7	3.2					0
Ret 02	S	2.60	5.30	13.8	4.50	0.35	2.7	3.2					0
Ret 03	S	2.60	5.30	13.8	4.50	0.35	2.7	3.2					0
Ret 04	S	2.60	5.30	13.8	4.50	0.35	2.7	3.2					0
Ret 05	S	2.60	3.80	9.9	4.50	0.35	2.7	3.2					0
Ret 06	S	2.60	5.90	15.3	4.50	0.35	2.7	3.2					0
Ret 06	E	2.60	11.60	30.2	4.50	0.35							0
Com 03	E	2.60	7.80	20.3	4.50	0.35							0

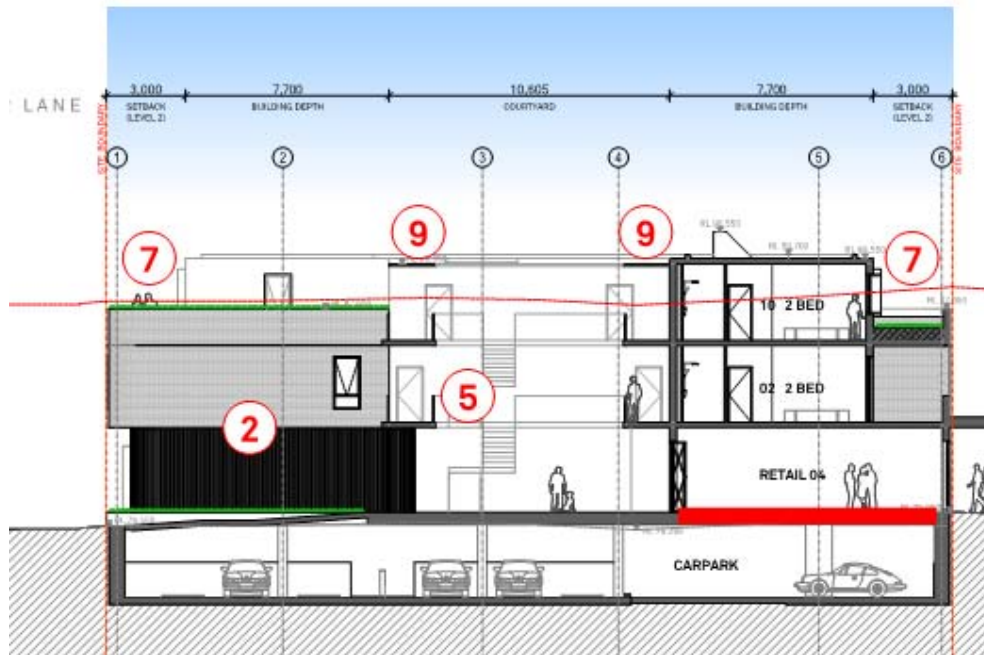




		Provide evidence to PCA	Certifier action
(e) Climate zone 5	Wall area <80% or more of wall-glazing construction area Class 3 or 9b building or Class 9a ward area wall Total R-Value R-0.10	Not applicable	Note
(e) Climate zone 6	Wall area <80% or more of wall-glazing construction area Class 3 or 9b building or Class 9a ward area wall Total R-Value R-0.07	Not applicable	Note

		Provide evidence to PCA	Certifier action
J1.6 (a) Climate zones 5 and 6	Floor insulation. Total floor R 2.0 required RC floor R 0.3	Provide R 1.7 insulation.	PCA must satisfy himself that the installation is compliant.





2. PART J2 – not used

3. PART J3 BUILDING SEALING

		Provide evidence to PCA	Certifier action
J3.1 NSW J(A)2	Note: includes Building Class 2	Applies	Note.
J3.2 NSW J(A)2	CHIMNEYS AND FLUES		Note
	chimney or flue of an open solid-fuel burning appliance provide a damper or flap that can be closed to seal the chimney or flue.	Not applicable	Note
J3.3 (a) NSW J(A)2	ROOF LIGHTS sealed, or capable of being sealed	Applies	Certify that the installation is deemed to satisfy
(b) NSW J(A)2 Climates zones 5 and 6	Constructed with— an imperforate ceiling diffuser or the like installed at the ceiling or internal lining level; or a weatherproof seal; or a shutter system readily operated either manually, mechanically or electronically by the occupant.	Applies	Certify that the installation is deemed to satisfy

		Provide evidence to PCA	Certifier action
J3.4 NSW J(A)2 (a) And (b)	WINDOWS AND DOORS Climate zones 5 and 6 must be sealed except windows and doors to AS 2017 fire door smoke door roller shutter door – out of hours shutter grille – out of hours other security door or device – out of hours	Applies	Certify that the installation is deemed to satisfy
(c) NSW J(A)2	seal to restrict air infiltration bottom edge of a door, must have a draft protection device;	Applies	Certify that the installation is deemed to satisfy
(d) NSW J(A)2	Provide self-closing doors to entrances	Applies	Certify that the installation is deemed to satisfy
J3.5 NSW J(A)2	Windows and doors Exhaust fans Fit with a sealing device such as a self-closing damper	Applies	Certify that the installation is deemed to satisfy
J3.6 NSW J(A)2	Construction of ceilings, walls and floors Ceilings, walls, floors and any opening such as a <i>window</i> frame, door frame, <i>roof light</i> frame or the like must be constructed to minimise air leakage in accordance with (b) when forming part of—	Show construction details and as installed evidences	Certify that the installation is deemed to satisfy

		Provide evidence to PCA	Certifier action
	(i)the <i>envelope</i>; or (ii)in <i>climate zones</i> 4, 5, 6, 7 or 8. Construction <i>required</i> by must be— (i)enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions; or (ii)sealed at junctions and penetrations with— (A)close fitting architrave, skirting or cornice; or (B)expanding foam, rubber compressible strip, caulking or the like.		
J3.7 NSW J(A)2	Evaporative coolers	Not applicable	Certify that the installation is deemed to satisfy

4. PART J4 – not used

		Provide evidence to PCA	Certifier action
J4.0		None	Note

5. PART J5 AIR CONDITIONING

		Action by a/c designer at CC and thereafter	Certifier action
J5.1 NSW J(A)3	Note: includes Building Class 2	Applies	Note
J5.2 NSW J(A)3	When not occupied • Capable of being deactivated. • Dampers close when a/c deactivated. • Ductwork sealed and insulated. • Capable of controlling temperature during sleeping periods. • Fan power to Table J5.2.	Applies	Refer separate report by a/c designer Certify that the installation is deemed to satisfy
J5.3 NSW J(A)3	Time Switch	Applies	Refer separate report by a/c designer Certify that the installation is deemed to satisfy
5.4 NSW J(A)3	Applies if Heating And Cooling System installed	Applies	Refer separate report by a/c designer Certify that the installation is deemed to satisfy
5.5 NSW J(A)3	Applies if Miscellaneous Exhaust Systems installed	Applies	Refer separate report by a/c designer Certify that the installation is deemed to satisfy

6. PART J6 ARTIFICIAL LIGHTING AND POWER

		Provide evidence to PCA	Certifier action
6		Applies	Certify that the installation is deemed to satisfy Refer also lighting designer certifications for compliance with Illumination code Part F4.
6.2	Submit to BCA, completed calculations from the following spreadsheet http://www.abcb.gov.au/Resources/Tools-Calculators/Lighting-Calculator	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
6.3	Room or space Provide individually operated switch or other device control unless SOU for people with disability or aged. Locate	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
	Switch controls location In visible position in room serviced or adjacent room.	Applies	
	Time switch To Specification J6	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
6.4	Interior Decorative & Display Lighting	Applies	Refer separate report by lighting designer

		Provide evidence to PCA	Certifier action
			Certify that the installation is deemed to satisfy
6.5	Perimeter lighting Control by a - daylight sensor or a - programmable time switch.	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
	When the perimeter lighting load exceeds 100W the light source efficacy must not be less than 60 Lumens/W or Controlled by a motion detector in accordance with Specification J6	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
	Decorative lighting	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
6.6	Boiling Water and chilled water storage units	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy

7. PART J7 HEATED WATER SUPPLY AND SWIMMING POOL AND SPA POOL PLANT

		Provide evidence to PCA	Certifier action
7.2 NSW J(A)4	Note: Includes Building Class 2 Design and install in accordance with Part B2 of NCC Volume Three — Plumbing Code of Australia.	Applies	Refer separate report by Hydraulic and Electrical consultants

8. PART J8 ACCESS FOR MAINTENANCE

		Provide evidence to PCA	Certifier action
8.2 NSW J(A)4	Note: includes Building Class 2 Provide access to any operable controls.	Inclusions Times switches Thermostats Air dampers Light fittings Heat transfer equipment	Certify that respective controls are in place.

END OF REPORT
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