

# Site B Planning Proposal - Yield and Solar Access Review

February 2025

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# WB - Statement

## FSR / GFA Review

Woods Bagot (WB) have been engaged by MostynCopper, on behalf of QIC, to review the Site B planning proposal prepared by Clarke Hopkins Clarke (CHC). CHC have developed enveloped drawings in response to the GANSW and DPHI engagement which have been reviewed by WB (in collaboration with CHC and the project team).

The independent analysis of the envelope drawings and resulting GFA calculations have considered the feedback from GANSW and DPHI whilst leveraging “standard industry practice: of 75% residential floor plate efficiency and 85% non-residential floor plate efficiency.

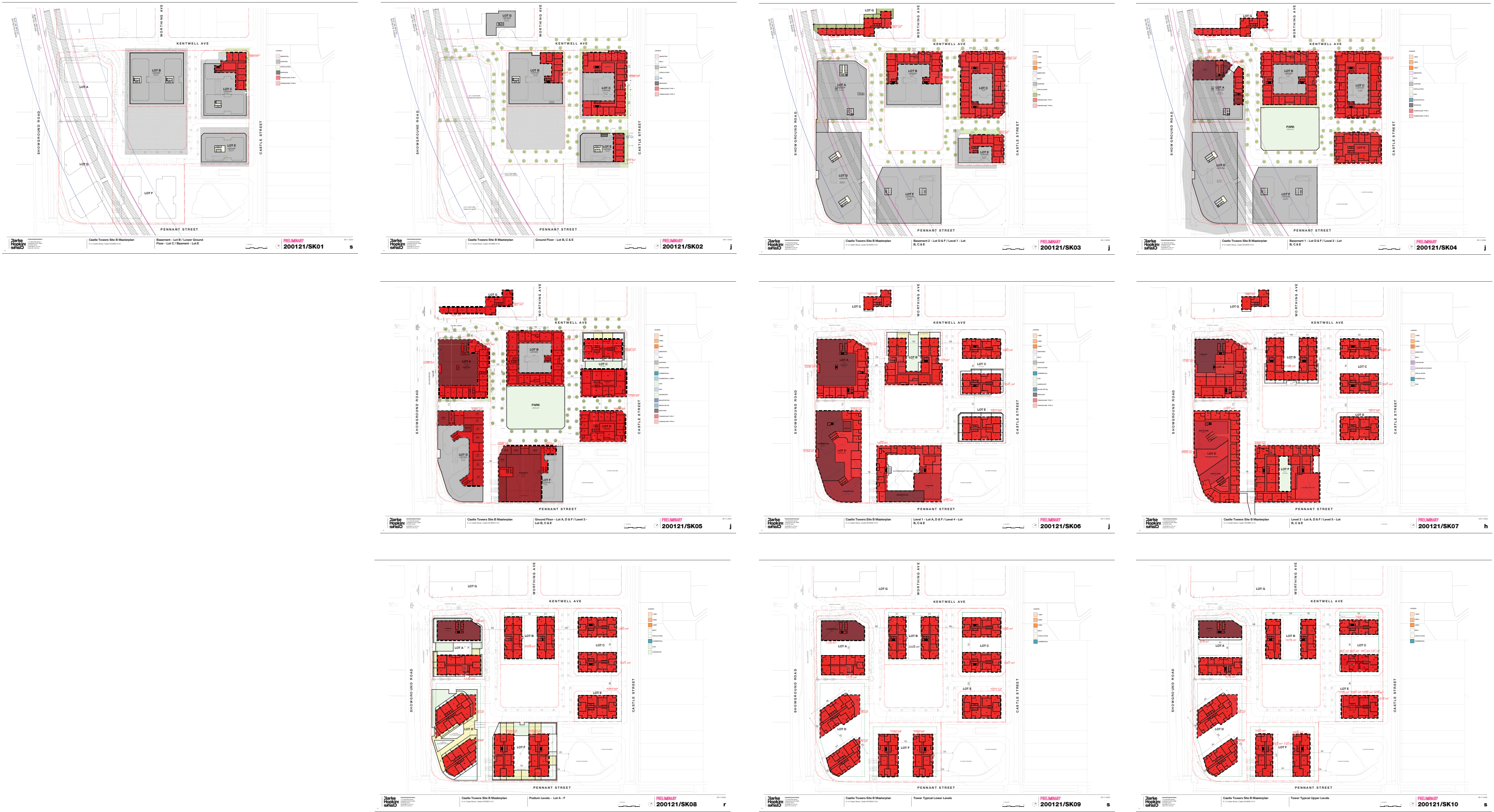
Following the completion of the analysis, WB has achieved and supports the targeted maximum FSR of 4.1:1 for the Site B planning proposal. A calculation of the Maximum Planning Envelope (MPE) areas provided by CHC achieves the 4.1:1 when reviewing in consideration of the standard industry practices.

## Solar Access Review

Upon a preliminary review of the solar access information provided by CHC (see appendix). WB confirm that the information shown and method of measurement seems consistent with our expectations to properly assess solar access. And that the results are seemingly accurate with regard to the indicative proposal.

This demonstrates that the massing proposed is capable of achieving the ADG solar access requirements during detailed design stages.

# Areas Analysed as Provided by CHC



# Area Schedule

## CASTLE HILL SITE B MASTERPLAN

Site Area 41890		Lot Area														Non Residential			
		LOTA		LOTB		LOT.C		LOT.D		LOTE		LOTF		LOT.G					
Base Level	F-F	MPE	GFA	MPE	GFA	MPE	GFA	MPE	GFA	MPE	GFA	MPE	GFA	MPE	GFA	MPE	GFA		
Level 28	3.2																		
Level 27	3.2							1079	809										
Level 26	3.2							1079	809										
Level 25	3.2							1079	809										
Level 24	3.2							1079	809										
Level 23	3.2							1079	809										
Level 22	3.2							1079	809										
Level 21	3.2							2497	1873					733	550				
Level 20	3.2							2497	1873					1000	750				
Level 19	3.2							2497	1873					1000	750				
Level 18	3.2							2497	1873					1000	750				
Level 17	3.2							2497	1873					1733	1300				
Level 16	3.2							2497	1873					1733	1300				
Level 15	3.2	1019	764					2497	1873					2000	1500				
Level 14	3.2	1019	764					2497	1873					2000	1500				
Level 13	3.2	1019	764					2497	1873	916	687			2000	1500	978	831		
Level 12	3.2	1019	764					2497	1873	978	734			2000	1500	978	831		
Level 11	3.2	1019	764	1619	1214	1507	1130	2497	1873	1035	776			2000	1500	978	831		
Level 10	3.2	1172	879	1619	1214	1547	1160	2497	1873	1091	818			2000	1500	1130	961		
Level 9	3.2	1172	879	1619	1214	1587	1190	2497	1873	1158	869			2000	1500	1130	961		
Level 8	3.2	1172	879	1619	1214	1667	1250	2497	1873	1211	908			2000	1500	1130	961		
Level 7	3.2	1172	879	2009	1507	2081	1561	2497	1873	1211	908			2300	1725	1130	961		
Level 6	3.2	1172	879	2009	1507	2081	1561	2497	1873	1211	908			2300	1725	1130	961		
Level 5	3.2	1172	879	2189	1642	2081	1561	2497	1873	1211	908			2300	1725	1130	961		
Level 4	3.2	1172	879	2714	2036	2081	1561	2497	1873	1211	908			2300	1725	483	362		
Level 3	3.2	1172	879	3006	2255	2789	2092	2497	1873	1925	1444			4297	3223	483	362		
Level 2	3.2	2897	2173	2749	2062	3318	2489	2757	2068	1956	1467			4297	3223	974	731		
Level 1	4	1713	1285	1548	1161	3185	2389	2154	1616	893	670			1979	1484	974	731		
Ground	4	1641	1231	677	508	2566	1925			372	279			320	240	974	731		
Lower Ground	4	409	307					930	698									8100	6885
B2	4																	855	727
Totals		21131	15848	23377	17533	27420	20565	57749	43312	16379	12284	43292	32469	3888	2916	31649	26902		

Area Type [Resi]	Percent
GBA	100%
GFA	75%
Area Type [Basement/Retail]	
GBA	100%
GFA	85%

## CASTLE HILL SITE B MASTERPLAN

Site	Use	Levels	MPE (m2)	GFA (m2)	FSR
LOT A	Residential	10	21,131	15848	
LOT B	Residential	12	23,377	17533	
LOT C	Residential	12	27,420	20565	
LOT D	Residential	26	57749	43312	
LOT E	Residential	14	16379	12284	
LOT F	Residential	22	43292	32469	
LOT G	Residential	5	3888	2916	
NON RESIDENTIAL		15	31649	26902	
Total				171829	4.10



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# Appendix

## Solar Access Diagrams from CHC Castle Towers Site B Architectural Statement

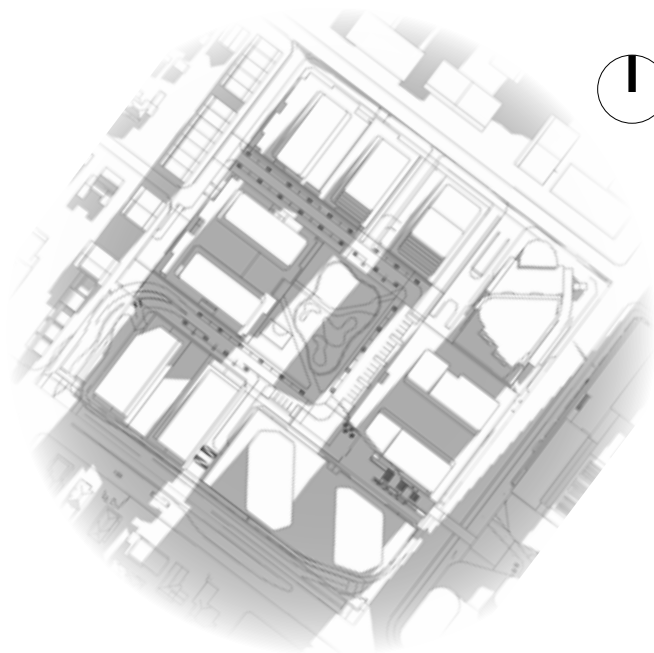
B.06 PRELIMINARY ADG REVIEW

SHADOW  
DIAGRAMS

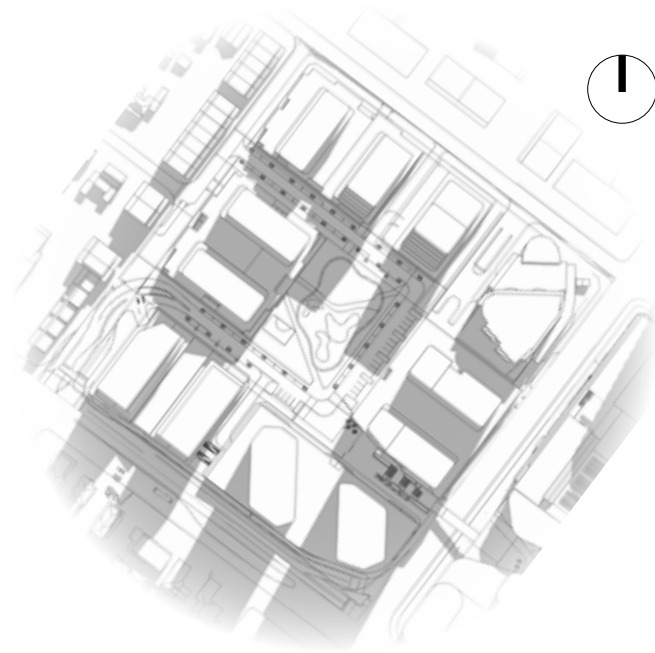
The shadow diagrams depict the resulting shadow impact of the proposed development during winter solstice between 9am and 2pm.

Lower-lying residential land-uses are located to the north of the site and are thus not negatively impacted by the proposal in terms of solar access.

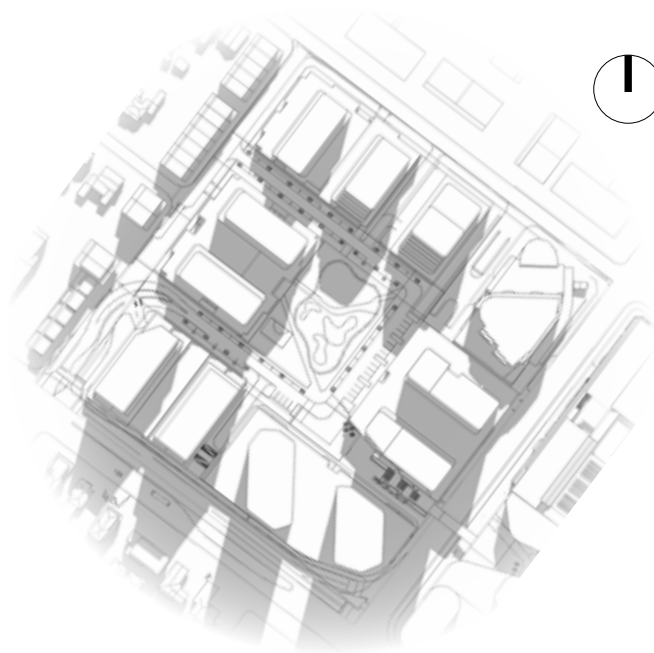
The primary shadow impact is to south of the development, with shadows falling mainly on the wide roadways and towards the Castle Hill urban core, with only minor impact to the residential areas to the west of the site.



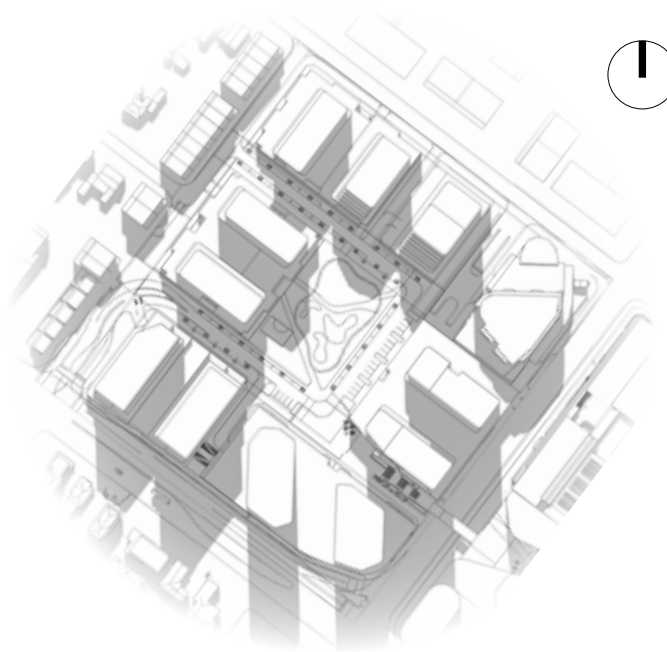
WINTER SOLSTICE | JUNE 21 | 09:00 AM



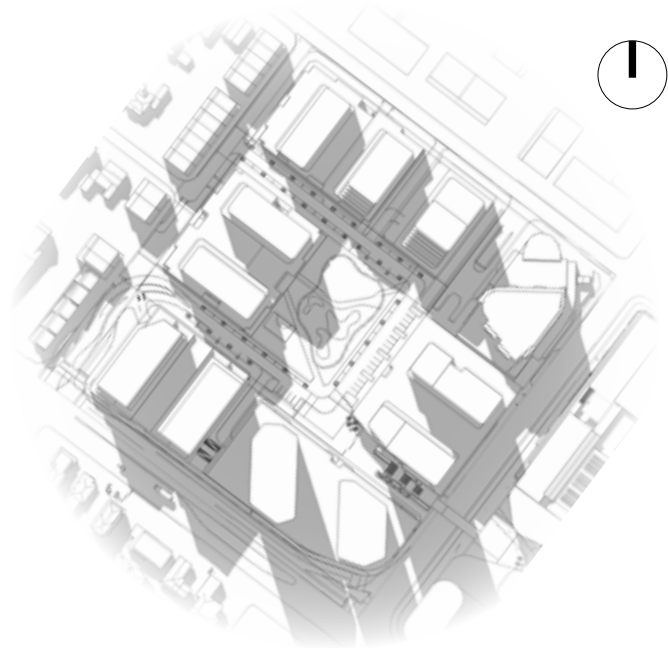
WINTER SOLSTICE | JUNE 21 | 10:00 AM



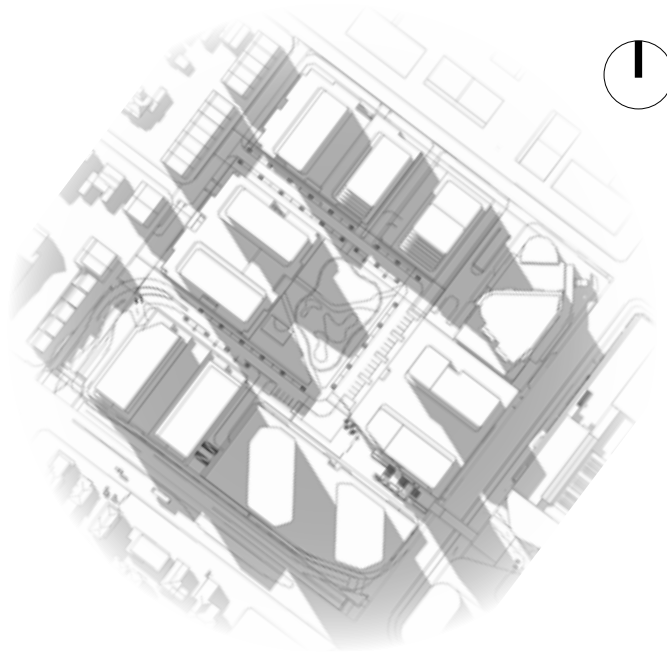
WINTER SOLSTICE | JUNE 21 | 11:00 AM



WINTER SOLSTICE | JUNE 21 | 12:00 PM



WINTER SOLSTICE | JUNE 21 | 1:00 PM



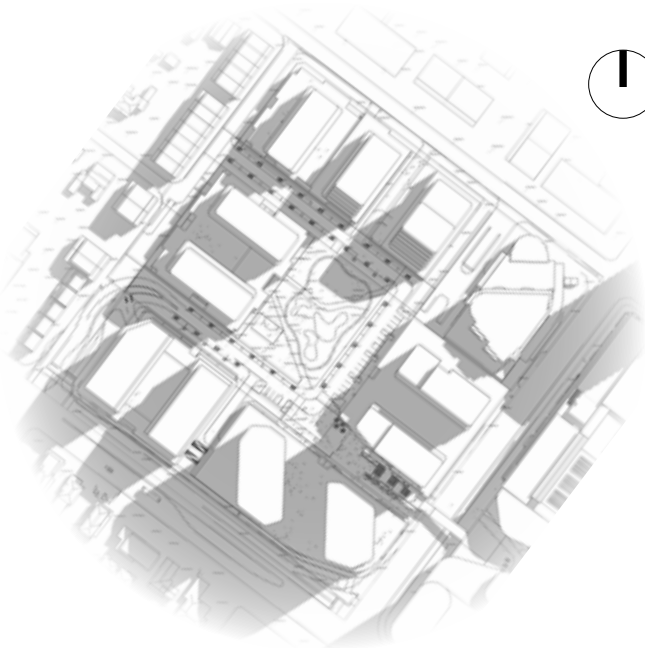
WINTER SOLSTICE | JUNE 21 | 2:00 PM

B.06 PRELIMINARY ADG REVIEW

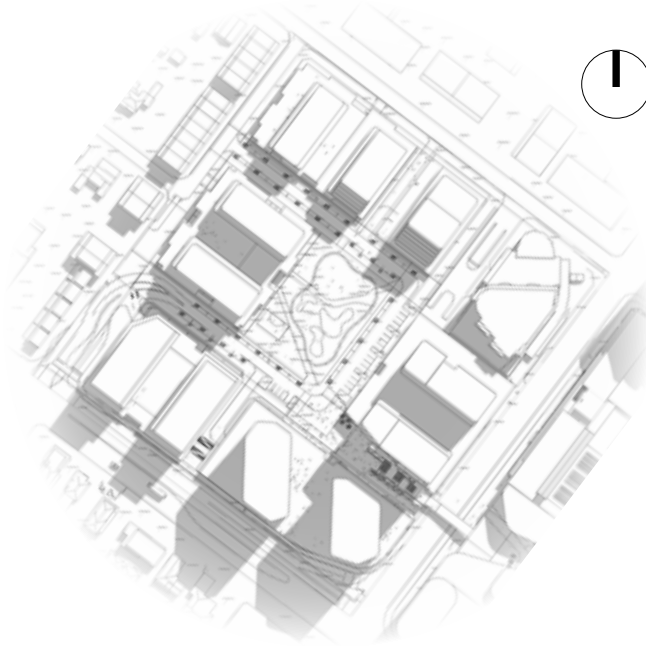
SHADOW  
DIAGRAMS

The shadow diagrams depict the resulting shadow impact of the proposed development during the equinox between 9am and 2pm.

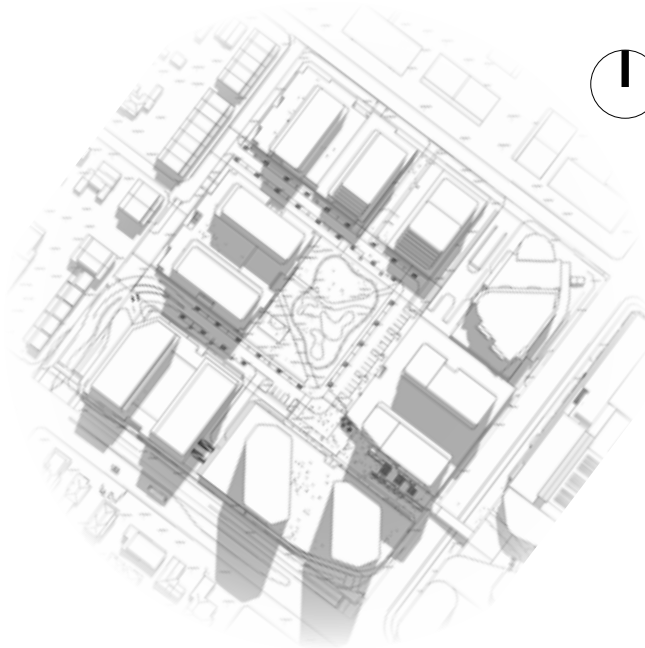
Shadows fall to on the wide roadway to the west and south of the site, but stay clear of the neighbouring residential developments.



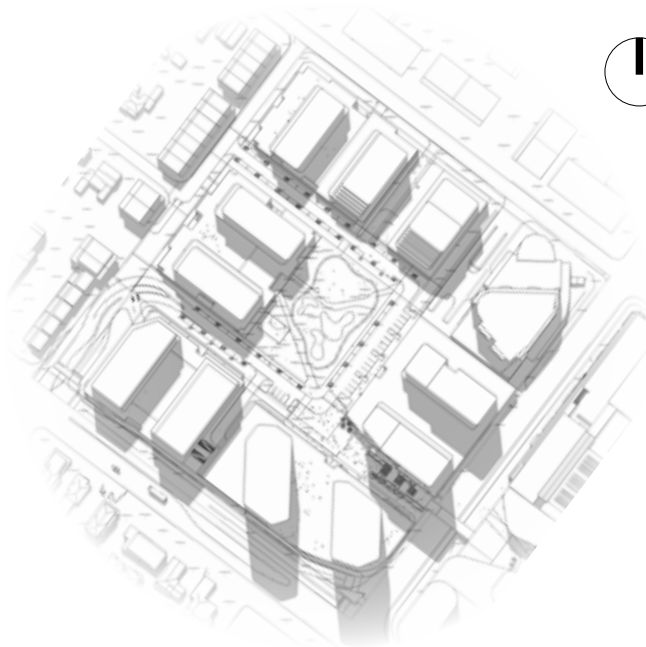
EQUINOX | SEPTEMBER 23 | 09:00 AM



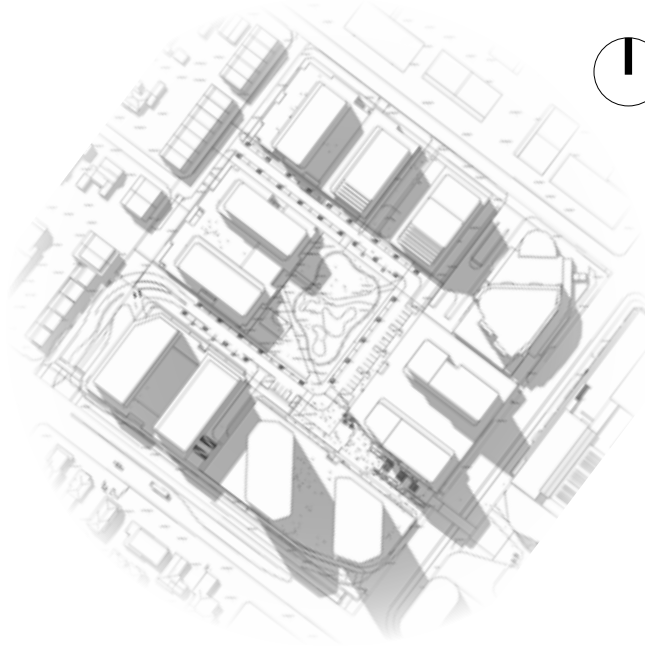
EQUINOX | SEPTEMBER 23 | 10:00 AM



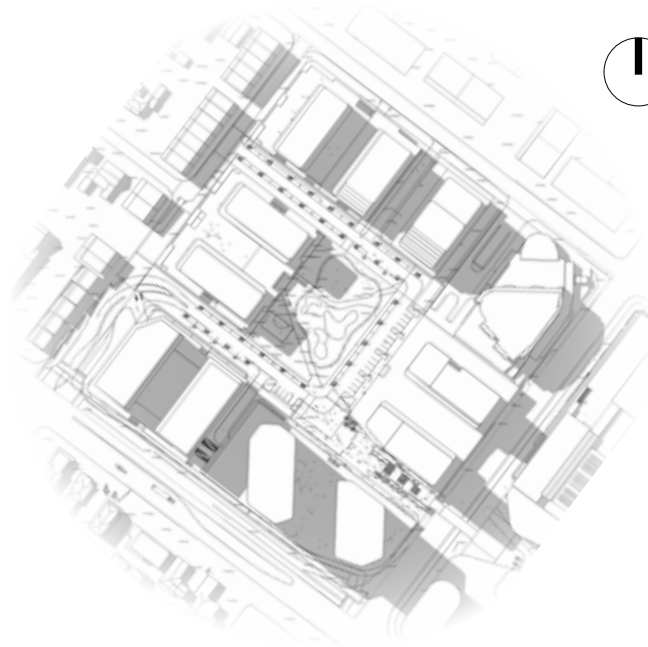
EQUINOX | SEPTEMBER 23 | 11:00 AM



EQUINOX | SEPTEMBER 23 | 12:00 PM



EQUINOX | SEPTEMBER 23 | 1:00 PM



EQUINOX | SEPTEMBER 23 | 2:00 PM



B.07 PRELIMINARY ADG REVIEW

# SOLAR ACCESS

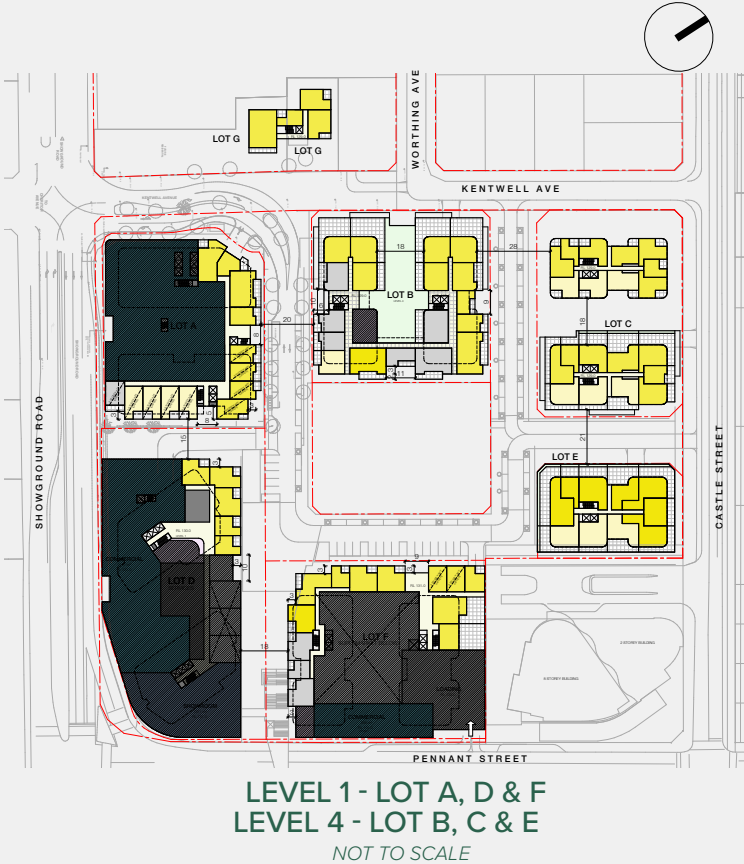
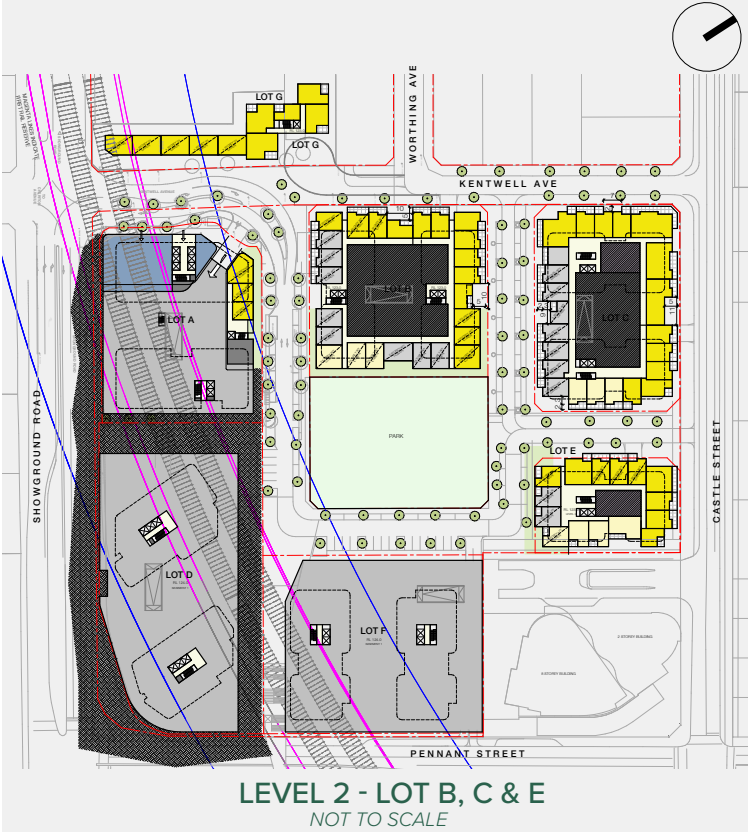
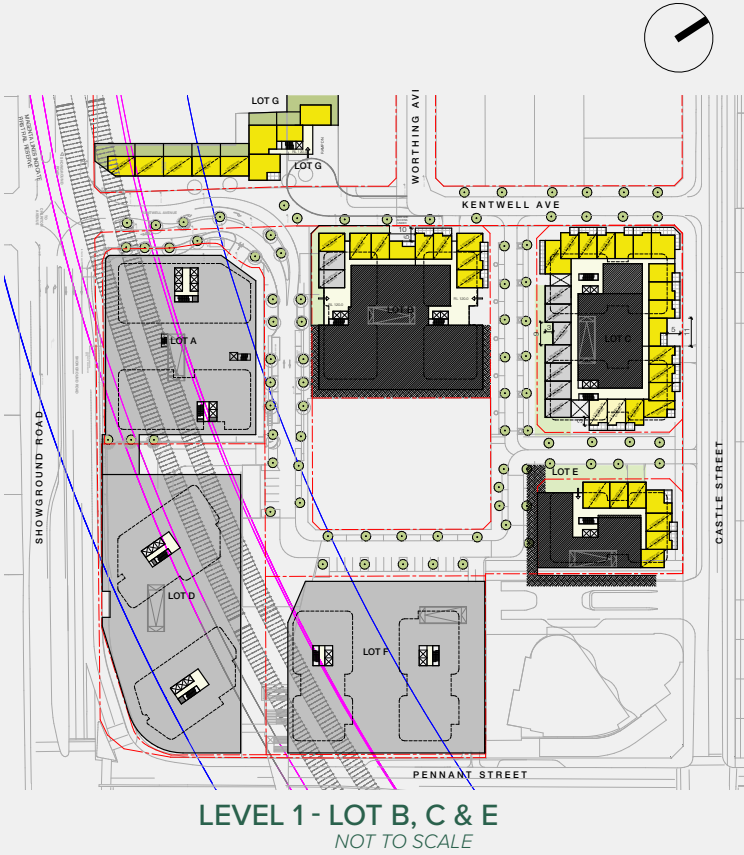
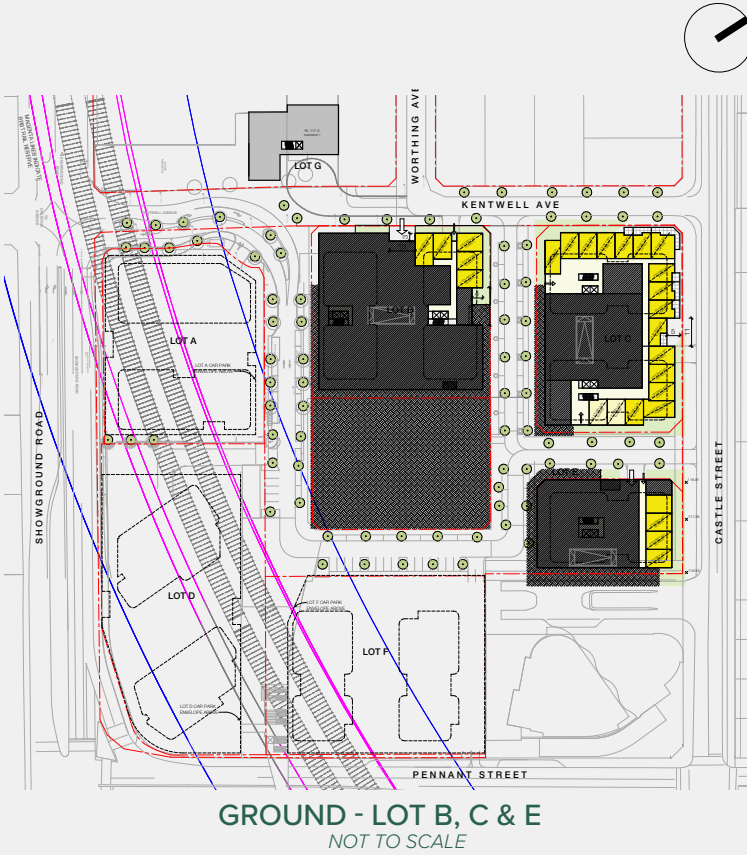
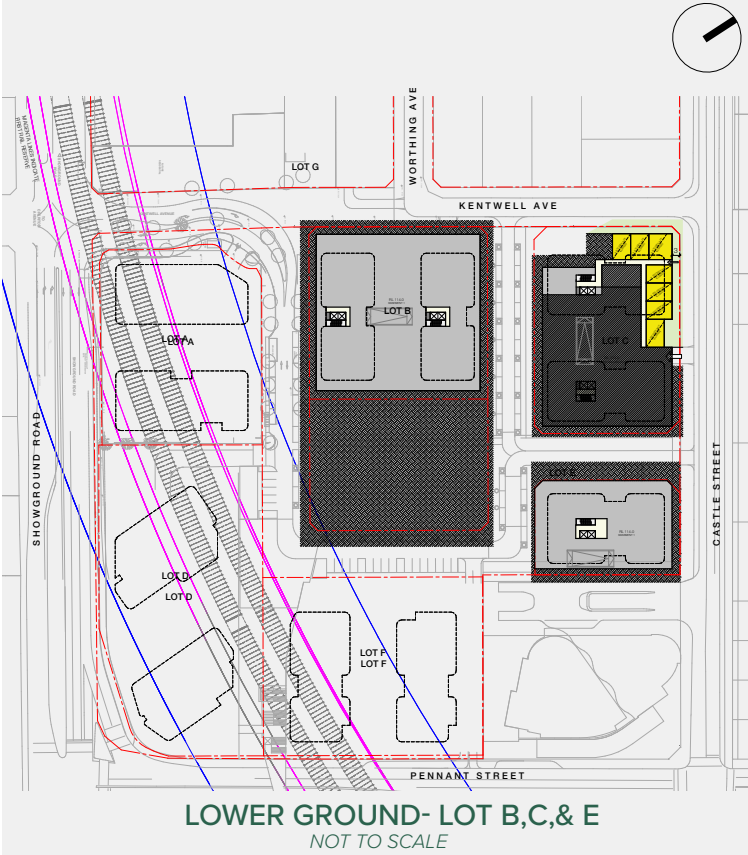
The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to its living space between 9am and 3pm on 21st June.

The adjacent plans and solar assessment summary table of the reference design scheme illustrates that at least 70% of the apartments within each lot receives a minimum of 2hrs solar access on 21st June. and no more than 15% of apartments recieve no sunlight on 21st June.

Narrow floor plates with compliant building separation as illustrated by this reference design scheme will further ensure for adequate solar access into apartments and their living spaces. Buildings floor plates and apartments are also to be orientated appropriately to ensure maximum solar gain where possible.

LEGEND

- 2 HRS OR MORE SOLAR ACCESS
- LESS THAN 2 HRS SOLAR ACCESS
- 0 HRS SOLAR ACCESS



B.07 PRELIMINARY ADG REVIEW




# SOLAR ACCESS

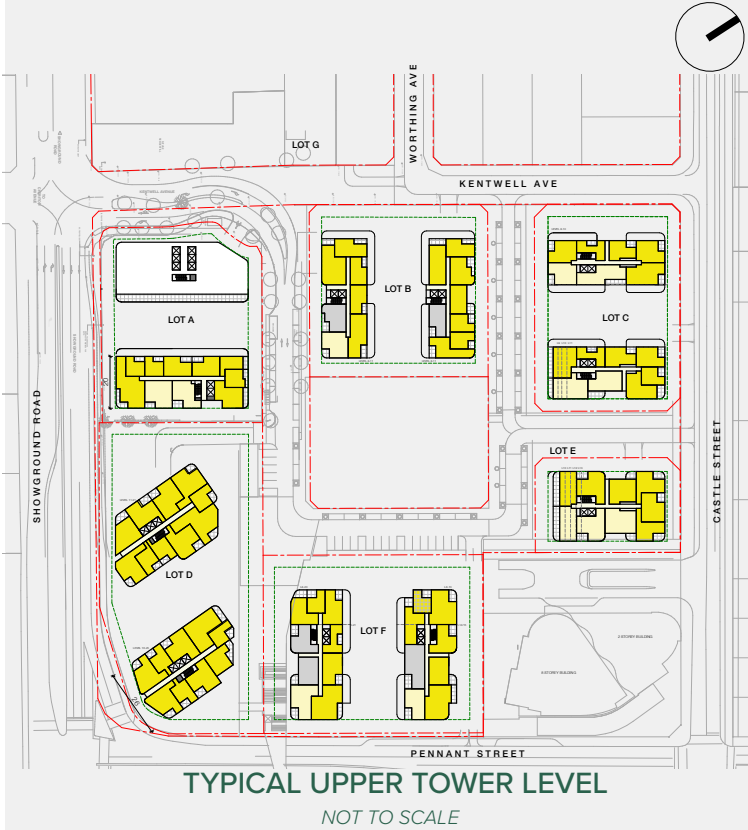
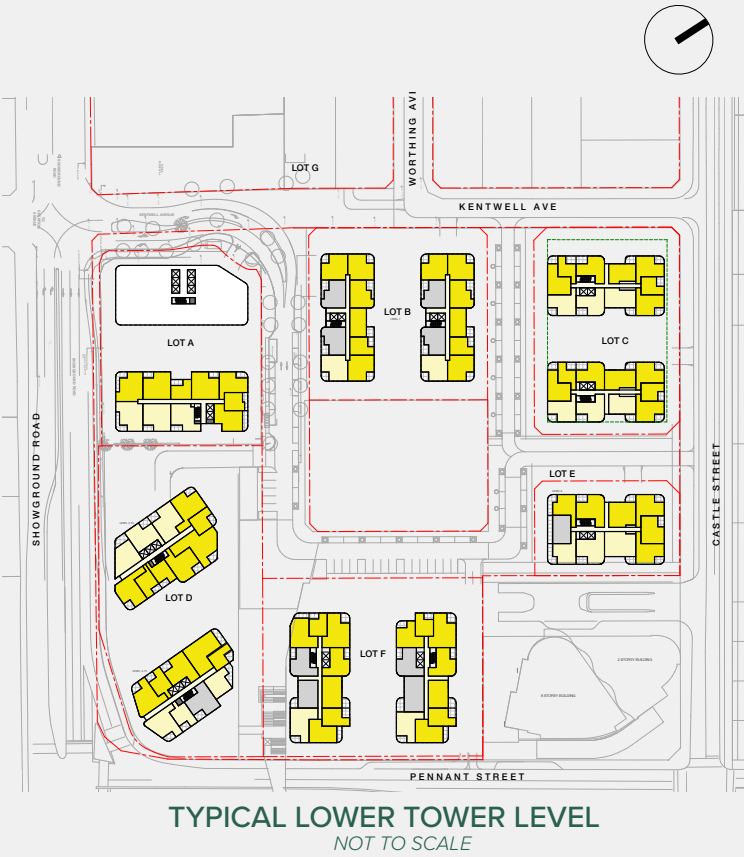
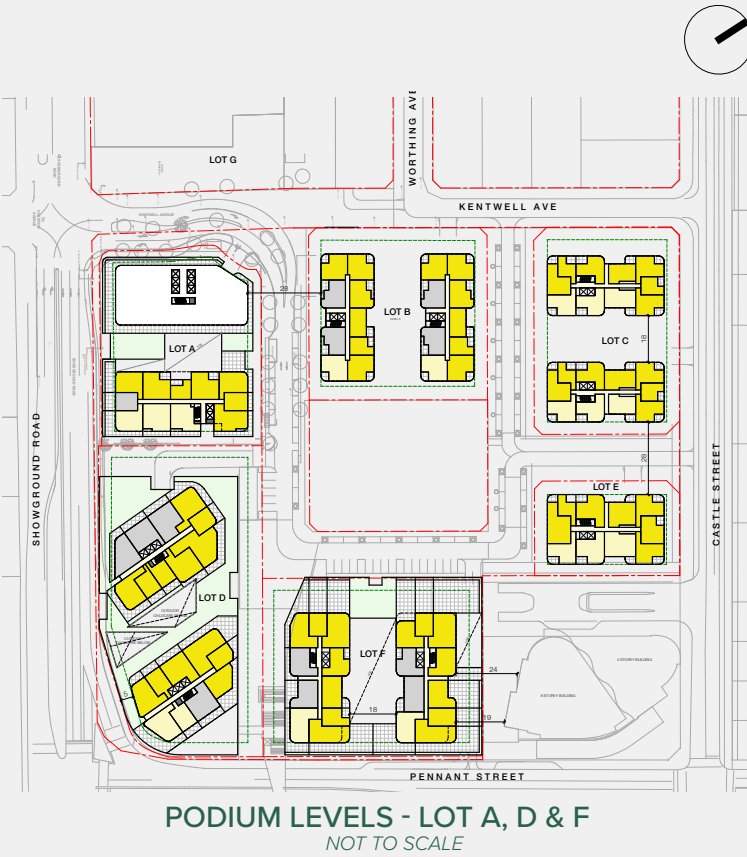
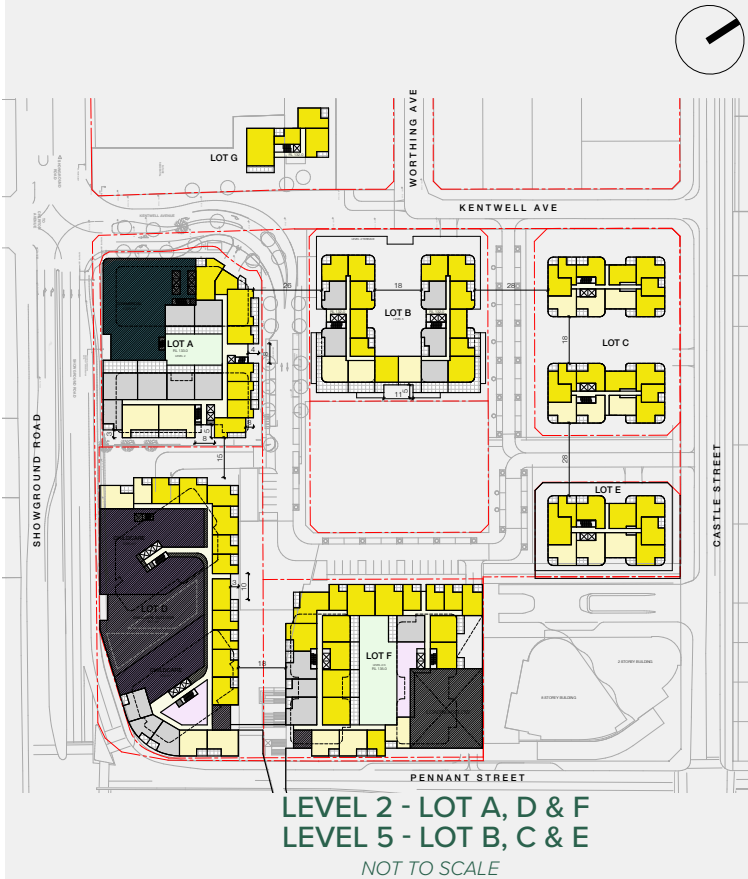
The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to its living space between 9am and 3pm on 21st June.

The adjacent plans and solar assessment summary table of the reference design scheme illustrates that at least 70% of the apartments within each lot receives a minimum of 2hrs solar access on 21st June. and no more than 15% of apartments recieve no sunlight on 21st June.

Narrow floor plates with compliant building separation as illustrated by this reference design scheme will further ensure for adequate solar access into apartments and their living spaces. Buildings floor plates and apartments are also to be orientated appropriately to ensure maximum solar gain where possible.

LEGEND

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-  LESS THAN 2 HRS SOLAR ACCESS
-  0 HRS SOLAR ACCESS





B.07 PRELIMINARY ADG REVIEW

SOLAR ACCESS

The ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to its living space between 9am and 3pm on 21st June.

The adjacent plans and solar assessment summary table of the reference design scheme illustrates that at least 70% of the apartments within each lot receives a minimum of 2hrs solar access on 21st June. and no more than 15% of apartments recieve no sunlight on 21st June.

Furthermore, a 3D solar analysis of the sun's eye indicates where apartments recieve a minimum of 2 hours of the day between 9am and 3pm on 21st June, has been included to provide an additional level of assessment.

The 3D solar analysis illustrates a substantial amount of morning and afternoon sunlight access and solar gain to a range of the apartment building facades, and consideration of appropriate design and shading should be given when detailing and designing the architectural facades.

Narrow floor plates with compliant building separation as illustrated by this reference design scheme will further ensure for adequate solar access into apartments and their living spaces. Buildings floor plates and apartments are also to be orientated appropriately to ensure maximum solar gain where possible.

ADG SOLAR ACCESS SUMMARY

	NO. OF APTS PER LOT	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
A	166	117	70%	40	24%	9	5%
B	175	124	71%	15	9%	36	21%
C	195	140	72%	47	24%	8	4%
D	420	322	77%	85	20%	19	5%
E	122	85	70%	35	29%	2	2%
F	322	224	70%	36	11%	62	19%
G	27	27	100%	0	0%	0	0%
TOTAL	1427	1039	73%	258	18%	136	10%

LOT A

LEVEL	NO. OF APT PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Lower Ground	3	3	100%	0	0%	0	0%
Ground	11	6	100%	4	0%	1	0%
Level 1	4	4	100%	0	0%	0	0%
Level 2	17	8	47%	2	12%	7	41%
Level 3 (Podium)	11	7	60%	3	30%	1	10%
Level 4-10	10	7	70%	3	30%	0	0%
Level 11-15	10	8	80%	2	30%	0	0%
TOTAL	166	117	70%	40	24%	9	5%

LOT B

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Ground	5	5	100%	0	0%	0	0%
Level 1	6	4	67%	0	0%	2	33%
Level 2	20	11	55%	3	15%	6	30%
Level 3	10	9	90%	0	0%	1	10%
L 4 - Podium	18	11	61%	1	6%	6	33%
Level 5	20	12	60%	3	15%	5	25%
Level 6	18	12	67%	2	11%	4	22%
Level 7	18	12	67%	2	11%	4	22%
Level 8	15	12	80%	1	7%	2	13%
Level 9	15	12	80%	1	7%	2	13%
Level 10	15	12	80%	1	7%	2	13%
Level 11	15	12	80%	1	7%	2	13%
TOTAL	175	124	71%	15	9%	36	21%

LOT C

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Lower Ground	7	7	100%	0	0%	0	0%
Ground	11	9	82%	2	18%	0	0%
Level 1	14	7	50%	0	0%	7	50%
Level 2	16	12	75%	3	19%	1	6%
Podium	20	13	65%	7	35%	0	0%
Level 4	20	14	70%	6	30%	0	0%
Level 5	20	14	70%	6	30%	0	0%
Level 6	20	14	70%	6	30%	0	0%
Level 7	20	14	70%	6	30%	0	0%
Level 8	15	11	73%	4	27%	0	0%
Level 9	15	11	73%	4	27%	0	0%
Level 10	13	11	85%	2	15%	0	0%
Level 11	4	3	75%	1	25%	0	0%
TOTAL	195	140	72%	47	24%	8	4%

LOT D

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Level 1	5	5	100%	0	0%	0	0%
Level 2	18	11	61%	4	22%	3	17%
Level 3 (Podium)	19	12	68%	4	21%	4	21%
Level 4-10	19	12	63%	6	32%	1	5%
Level 11-15	19	12	63%	3	16%	1	5%
Level 16-21	19	19	100%	2	11%	0	0%
Level 22-25	9	9	100%	2	22%	0	0%
TOTAL	420	322	77%	85	20%	19	5%

LOT E

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Ground	4	4	100%	0	0%	0	0%
Level 1	4	4	100%	0	0%	0	0%
Level 2	12	6	47%	4	33%	2	20%
Level 3	11	8	73%	3	27%	0	0%
Level 4	10	7	70%	3	30%	0	0%
Level 5	10	7	70%	3	30%	0	0%
Level 6	10	7	70%	3	30%	0	0%
Level 7	10	7	70%	3	30%	0	0%
Level 8	10	7	70%	3	30%	0	0%
Level 9	9	6	67%	3	33%	0	0%
Level 10	9	6	67%	3	33%	0	0%
Level 11	9	6	67%	3	33%	0	0%
Level 12	7	5	71%	2	29%	0	0%
Level 13	7	5	71%	2	29%	0	0%
TOTAL	122	85	70%	35	29%	2	2%

LOT F

LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Ground	2	2	0%	0	0%	0	0%
Level 1	11	8	73%	0	0%	3	27%
Level 2-3	23	16	70%	3	13%	4	17%
Level 4-7	20	14	70%	2	10%	4	20%
Level 8-13	17	12	71%	2	12%	3	18%
Level 14-15	15	10	67%	2	13%	3	20%
Level 16-20	9	6	67%	1	11%	2	22%
Level 21	6	4	67%	1	17%	1	17%
TOTAL	322	224	70%	36	11%	62	19%

LOT G

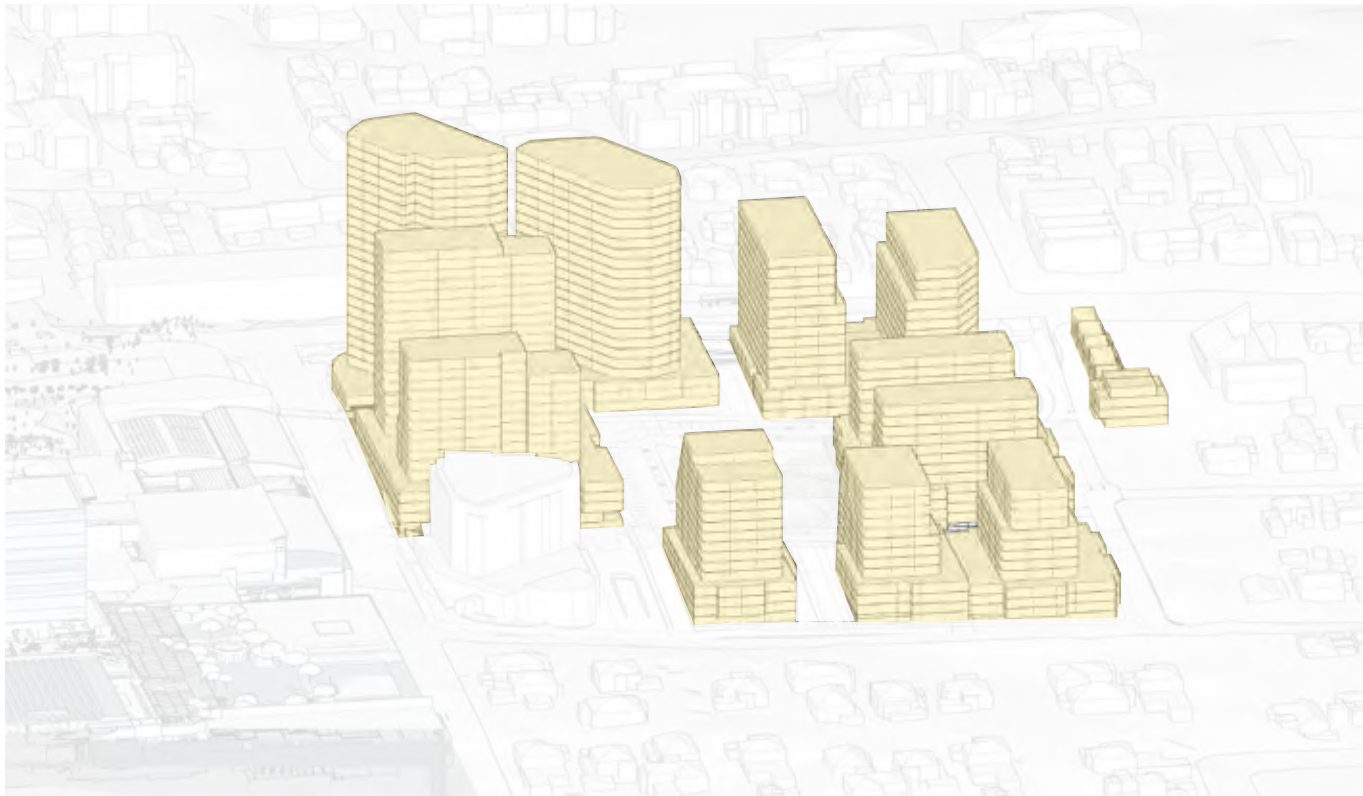
LEVEL	NO. OF APARTMENTS PER FLOOR	MIN. 2HRS SOLAR ACCESS	%	1HR SOLAR ACCESS	%	NO SOLAR ACCESS	%
Ground	4	4	100%	0	0%	0	0%
Level 1	5	5	100%	0	0%	0	0%
Level 2	5	5	100%	0	0%	0	0%
Level 3	4	4	100%	0	0%	0	0%
Level 4	4	4	100%	0	0%	0	0%
Townhouses	5	5	100%	0	0%	0	0%
TOTAL	27	27	100%	0	0%	0	0%



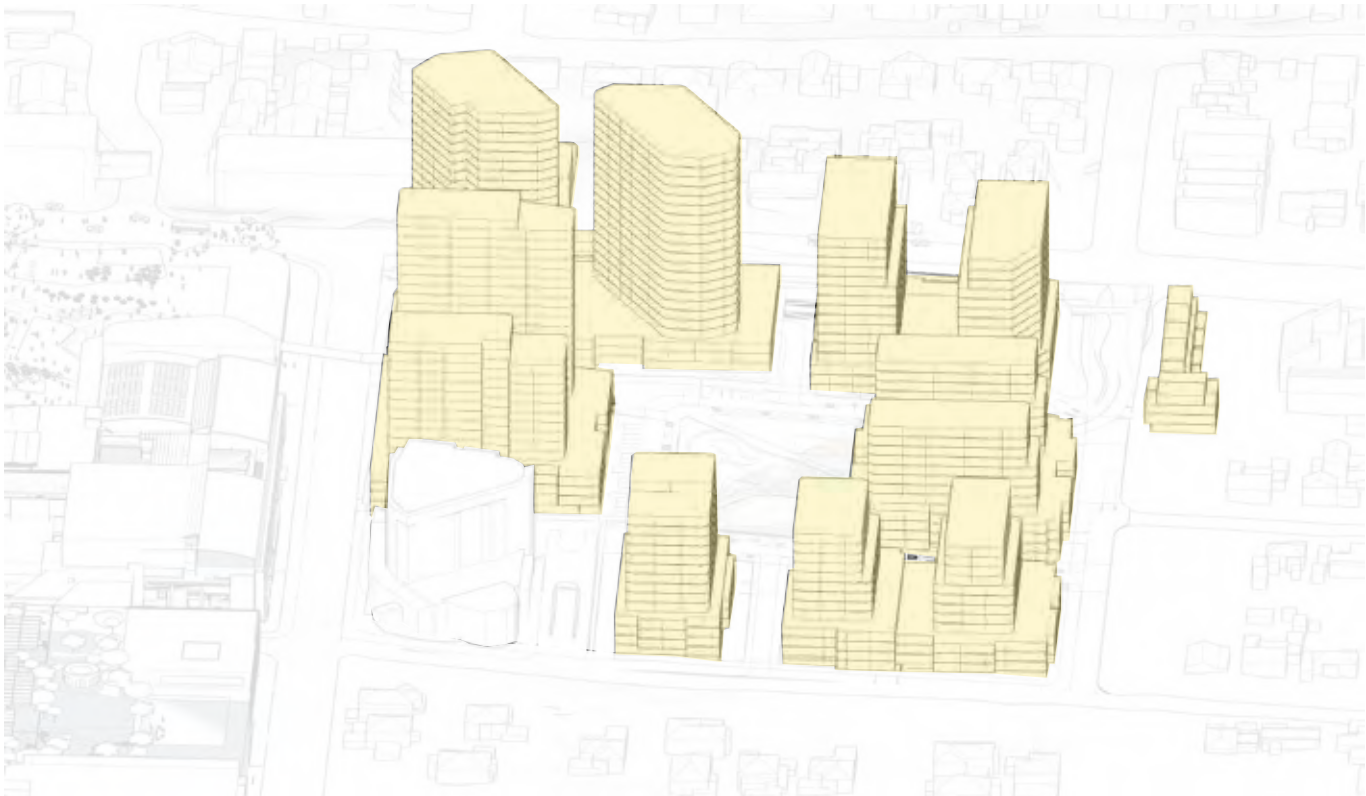
B.07 PRELIMINARY ADG REVIEW

# SOLAR ACCESS - SUN'S EYE

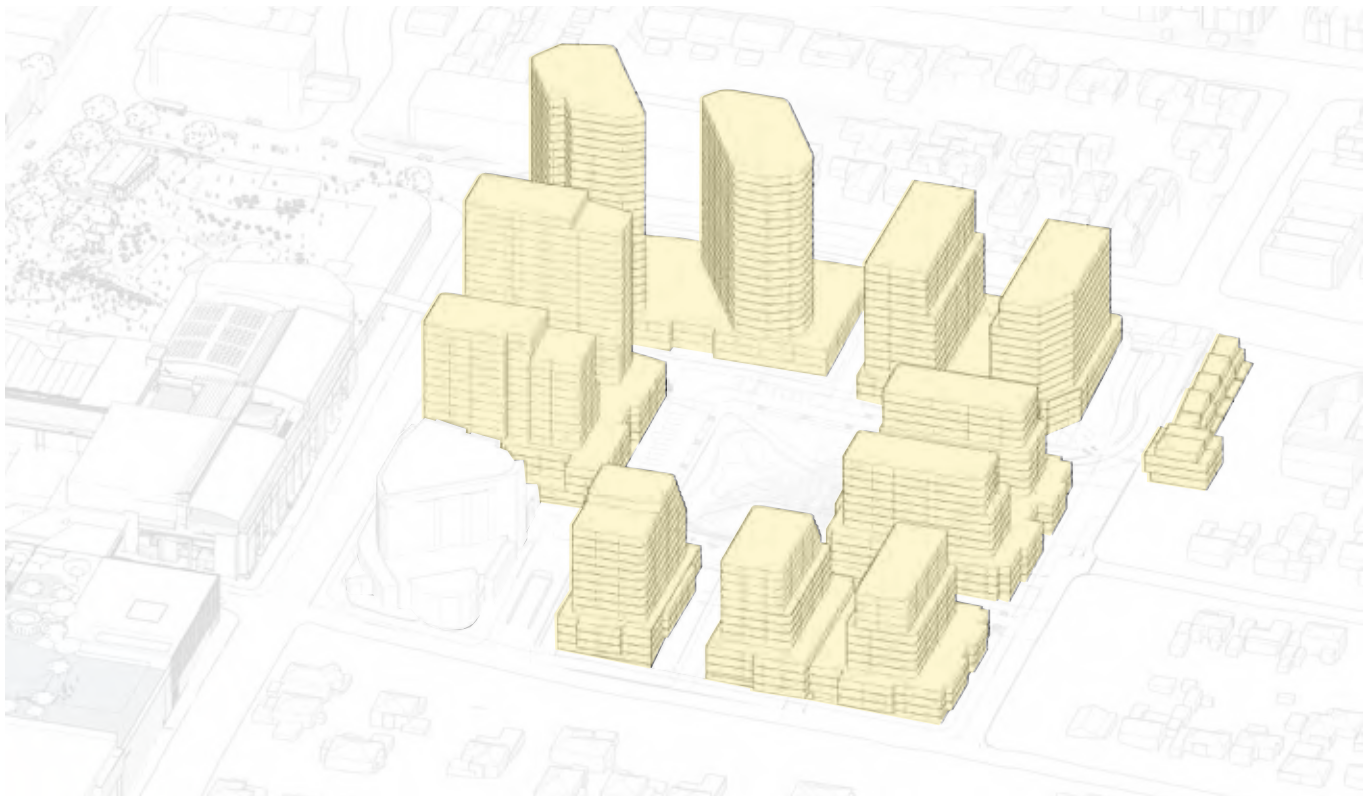
APARTMENT VISIBLE TO THE SUN & RECEIVING SOLAR



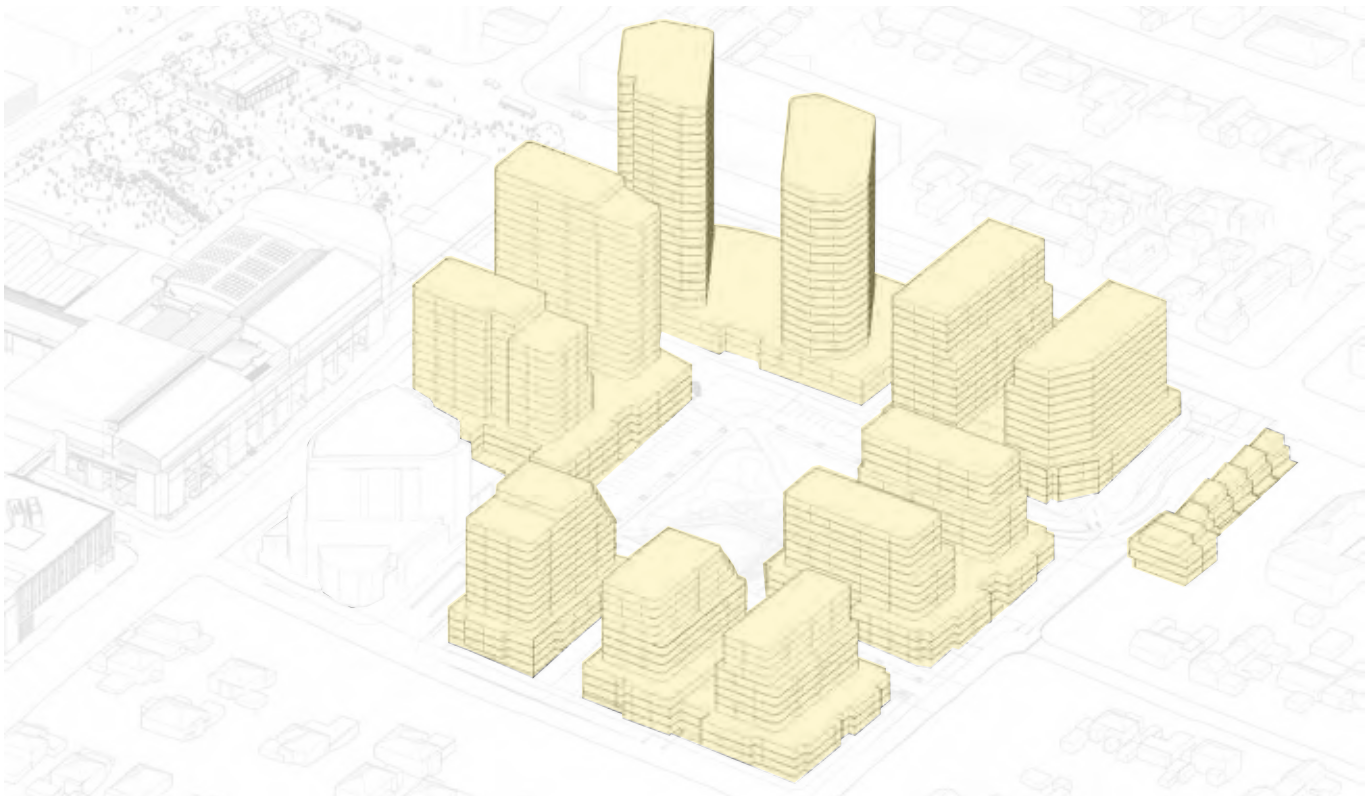
9AM - JUNE 21



10AM - JUNE 21



11AM - JUNE 21



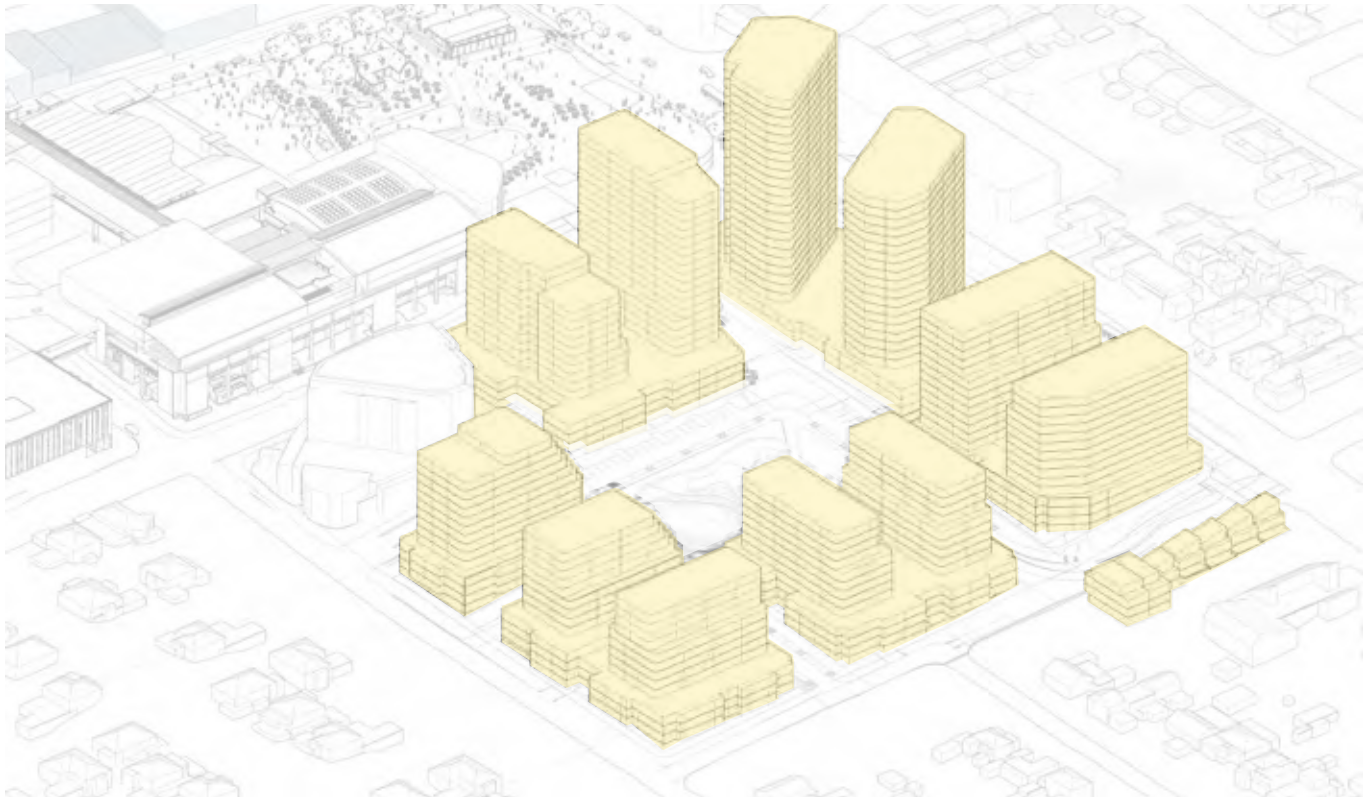
12PM - JUNE 21



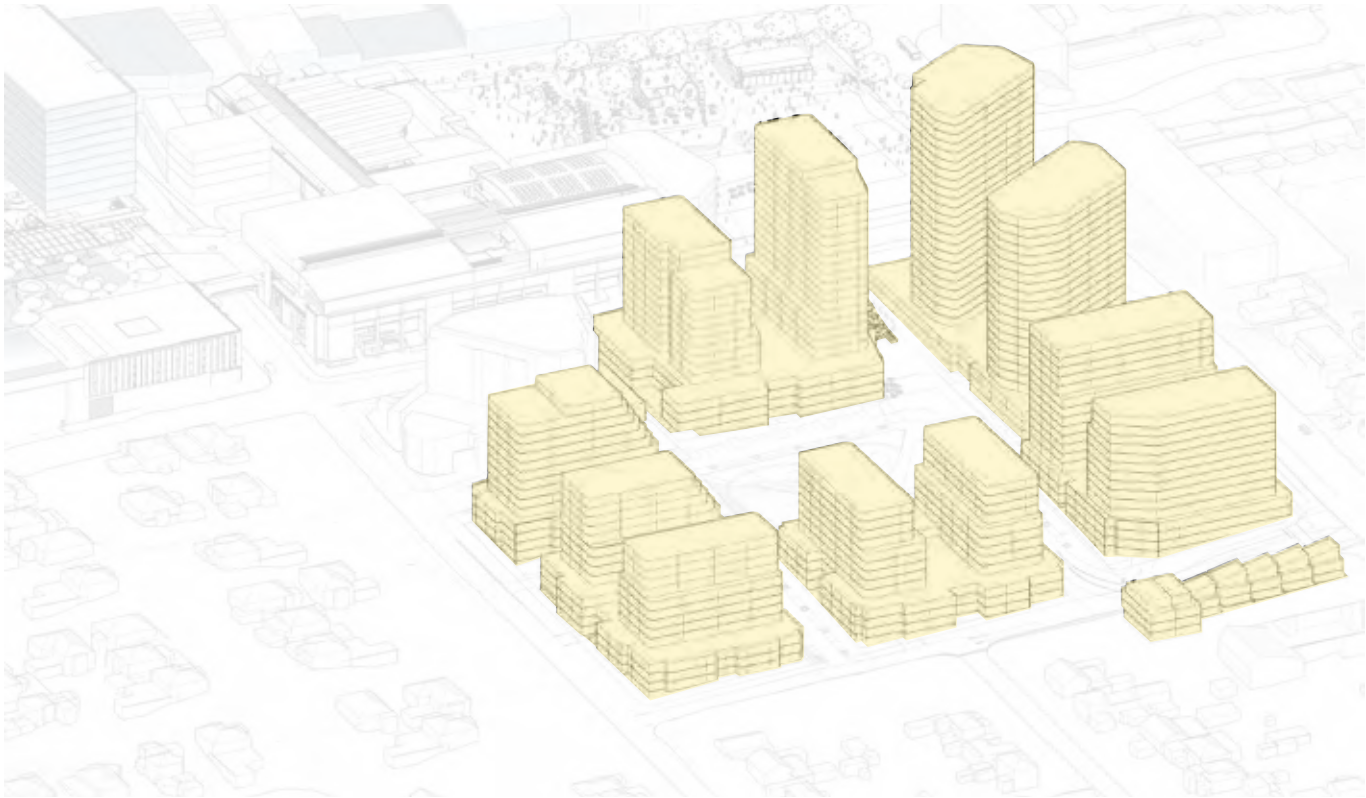
B.07 PRELIMINARY ADG REVIEW

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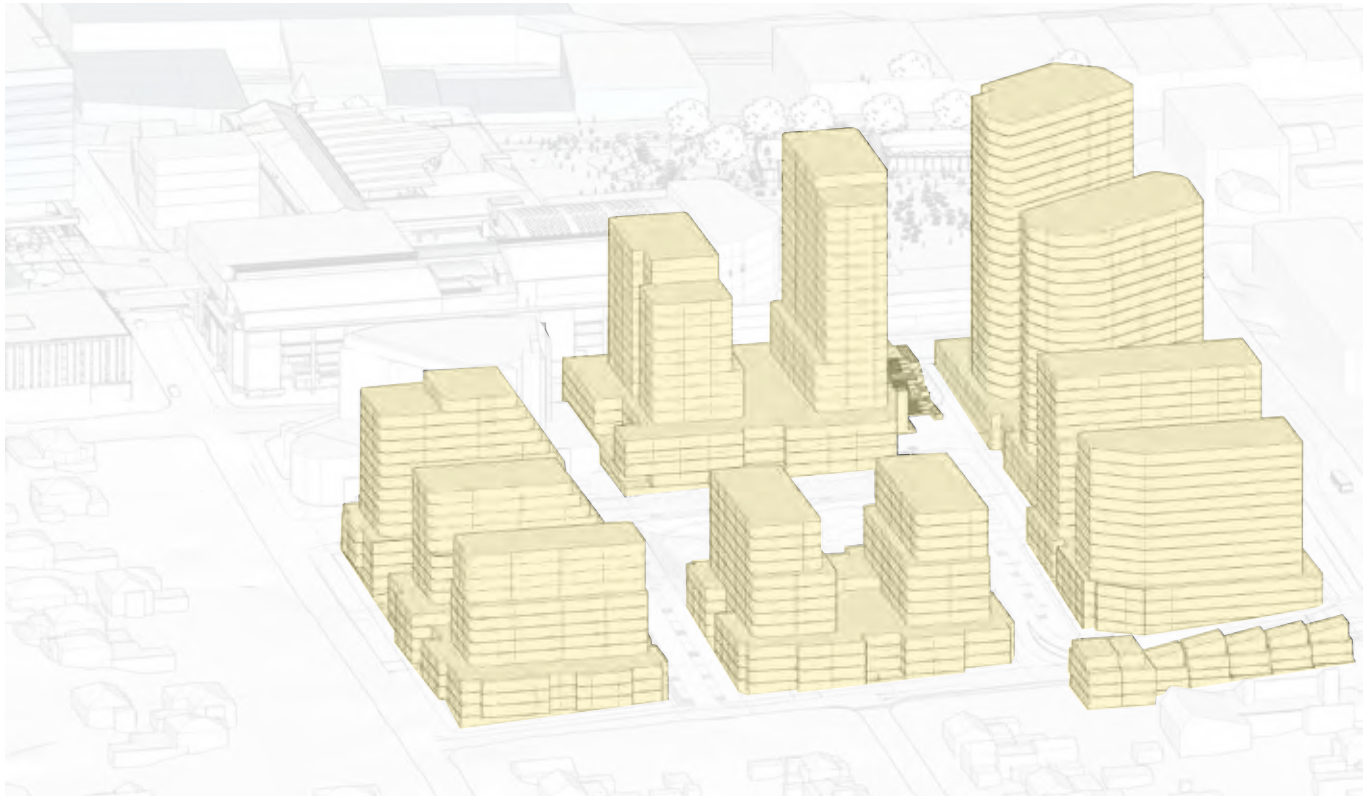
APARTMENT VISIBLE TO THE SUN & RECEIVING SOLAR



1PM - JUNE 21



2PM - JUNE 21



3PM - JUNE 21