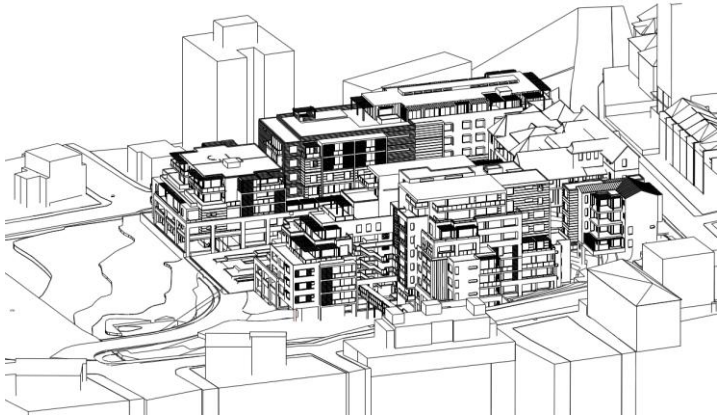
Revised

Analysis Report

SEPP65 ISSUES OF AMENITY

SOLAR ACCESS



PROPOSED INDEPENDENT LIVING UNITS AND RACF
THE TERRACES
Scottish Hospital 2 Cooper Street, Paddington

18 June 2011

Signed,

STEVE KING

CONSULTANT ARCHITECT

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0.0 SUMMARY

0.1 This report revises my original report of 23 September 2010. This revised report addresses issue of **solar access** and **overshadowing** relating to the design of the proposed redevelopment of the property known as **Scottish Hospital, 2 Cooper Street, Paddington** now proposed to provide for 79 apartments as Independent Living Units and a 100 bed residential aged care facility.

The revisions of the report relate to:

- Deletion of three apartments on the top floor of the building designated the Brown Street ILU;
- Review of the 'views from the sun after correction of a previous minor error in the solar geometry settings for the 'views from the sun'.

I note that the review of the solar geometry error referred to above has not substantially affected the assessment of solar access for overwhelming majority of the proposed dwellings. I have taken a conservative view of the reduced area of glazing for three apartments predicted to be sunlit by the revised views of the 3D digital model, and amended the compliance table accordingly.

0.2 Solar access. I have independently reviewed the design for solar access for the multi-unit residential component. I confirm that the applicable performance requirements of the Residential Flat Design Code which gives effect to SEPP65 are satisfied.

0.3 Overshadowing. This report does not assess overshadowing of neighbouring properties. However, the review and correction of the solar geometry for the 'views from the sun' now reconciles with other shadow rendered views produced by the architects, as part of analysis of such overshadowing impacts. My previous report having included views from the sun with minor errors had the effect of suggesting somewhat greater overshadowing of a number of such properties than is actually likely. The corrected views confirm that the overshadowing predictions produced by the 3D digital model are correct.

1.0 PRELIMINARIES

1.1 My qualifications and experience are summarized in **2.0 Credentials**.

1.2 I have visited the site. The documents utilised to support the opinions contained in this report are detailed in **3.0 Documents and Information**.

2.0 CREDENTIALS

2.1 I have been teaching architectural design, thermal comfort and building services at the Universities of Sydney, Canberra and New South Wales since 1971. From 1992, I was a Research Project Leader in SOLARCH, the National Solar Architecture Research Unit at the University of NSW.

Until November 2006, I was the Associate Director, Centre for Sustainable Built Environments (SOLARCH), UNSW. My teaching, research and practice specialization is in the assessment of comfort and energy performance of buildings, in particular solar access and other environmental control parameters such as natural ventilation.

My research and consultancy includes work in solar access, energy simulation and assessment for houses and multi-dwelling developments, building assessments under the NSW SEDA Energy Smart Buildings program, appropriate design and alternative technologies for museums and other cultural institutions, and 'asthma and domestic building design'. SOLARCH/UNISEARCH under contract to SEDA NSW set up and administered the House Energy Rating Management Body (HMB), to accredit assessors under the Nationwide House Energy Rating Scheme, NSW. I was until early 2004 the technical supervisor of the HMB, with a broad overview of the dwelling thermal performance assessments carried out by assessors in NSW over the initial four and a half years. I carried out the Independent Expert Review of the comparison of NatHERS and DIY methods of compliance for Thermal Comfort under BASIX, for the NSW Department of Planning. I have delivered professional development courses on topics relating to energy efficient design both in Australia and internationally.

I am the principal author of SITE PLANNING IN AUSTRALIA: Strategies for energy efficient residential planning, funded by the then Department of Primary Industry and Energy, and published by AGPS, and of the RAIA Environment Design Guides on the same topic. Through UNSWGlobal and NEERG Seminars, I conduct training in solar access and overshadowing assessment for Local Councils.

Also of relevance, I teach the wind and ventilation components of environmental control in the course in architecture at UNSW, and am the author of refereed papers and internationally referenced, web accessed coursework materials on the subject.

I am a registered Architect and maintain a specialist architectural consultancy practice in Sydney and Canberra.

2.2 I regularly assist the Land and Environment Court as an expert witness in similar matters.

3.0 DOCUMENTS AND INFORMATION

3.1 I base my report on

- DA architectural drawings, numbered DA203 through DA211, DA221,222,231 and 232, Rev D issued to me 1.6.2011, by JPR Architects.
- Half-hourly 'views from the sun' views of the digital model prepared by the architects to my instructions.
- Digital copy of ArchiCAD model file.

4.0 GENERAL PLANNING AND MASSING

The site address is No 2 cooper Street, Paddington. The site is bounded to the north by Dillon Reserve, to the east by Stephen Street, to the west by Brown and Nield Avenue and Cooper Street to the south. The site drops in level from Cooper St to Dillon Reserve by approximately 16m.

The proposal is to build/ replace the existing Nursing Home facility with 100 beds, retain/restore and adaptively re-use the existing heritage building at Cooper Street. A total of 82 independent living units in three new separate buildings are proposed, including adaptive re-use of the heritage building located at the 'top' of the site. The location of the new Aged Care building will be at the corner of Stephen and Cooper St.

The independent Living Units are located and named in the plan as:

1. Brown St ILU: 4-8 storey building with 52 apartments,
2. Stephen St ILU: 3-5 storey building with 10 apartments,
3. Gate Keeper's Lodge at Cooper St: 4 storey building with 4 apartments,

4. Heritage Building: Adaptively re-used with 9 apartments,
5. Top of Aged Care Building with 4 apartments.

The new buildings appear to be sited within the constraints of the site topography, the retention of the heritage trees, the dedication of large open space to the north adjacent to Dillon reserve and the conservation of the heritage building and landscape/ terrace courtyard. I have been advised that the retention of the residents within the existing nursing home dictates the location of the major new building.

In considering the projected solar access compliance for amenity for the proposed development, I give consideration to the apparent general strategy for site planning and building massing. I note that approximately eight of the total of 82 units are so located in plan within the southern portion of the Brown St ILU complex, that they are unlikely to receive any sun in mid-winter. A further six units have limited opportunity for the glazing lines, and only nominal sun to private open space early in the morning at mid-winter. However, I can also clearly infer the direct influence of the drip-lines of the retained trees as the major constraint on the building layouts.

Other than alienating the central north facing open space, I cannot nominate any logical variation on the planning which would eliminate a similar portion of units without useful sun. That solution is clearly highly undesirable, because it would mask the most prominent facade of the heritage building. As has been confirmed by advice from the approving authority (and reflected in the revised design by deletion of the highest storey), additional height is limited by controls, and is also likely undesirable on programmatic grounds. I therefore conclude that the massing and planning provide for reasonable solar access strategy on this constrained site.

5.0 SOLAR ACCESS

5.1 Relevant solar access standard

The Residential Flat Design Code gives the following quantified recommendations:

- Living rooms and private open spaces for at least 70 percent of apartments in a development should receive a minimum of three hours direct sunlight between 9am and 3pm in mid winter.
  In dense urban areas a minimum of two hours may be acceptable.
- Limit the number of single-aspect apartments with a southerly aspect (SW-SE) to a maximum of 10 percent of the total units proposed.
- Developments which seek to vary from the minimum standards must demonstrate how site constraints and orientation prohibit the achievement of these standards and how energy efficiency is addressed (see Orientation and Energy Efficiency).
  (Rules of Thumb: Daylight Access p. 84)

5.2 Achieved solar access

5.2.1 Predicted solar access: methodology

Because of the complexity of *demonstrating* in detail the quantification of solar access to glazing of various orientations — and taking into account the considerable mutual and self-shading and other potential obstructions by recessed balconies and other facade detailing — I undertook exhaustive detailed analysis by computer generated projections. The digital model was provided to me by the applicant from the ArchiCAD software used to prepare the design and application documents, and independently checked by me for sufficient accuracy. The views of the model were prepared by the architects on my instructions, using the heliodon routine of the ArchiCAD software package, and with the appropriate solar geometry data supplied by me. In this report, I include in the Appendix table of views from the sun the screenshots of the solar geometry settings, in order to avoid further concern for their accuracy.

I independently verified the direction of North by examining the cadastral grid north, which is, as expected, within 1° of the north on the model provided to me. That possible margin of error is not relevant in solar access analysis.

The projections used are known as *'View from the Sun'*, and were taken at half hourly intervals. A view from the sun shows all sunlit surfaces at a given time and date. It therefore allows a very precise count of sunlight hours on any glazing or horizontal surface, with little or no requirement for secondary calculations or interpolation. Figure 1 illustrates the technique. *Note that a 'view from the sun' by definition does not show any shadows.*

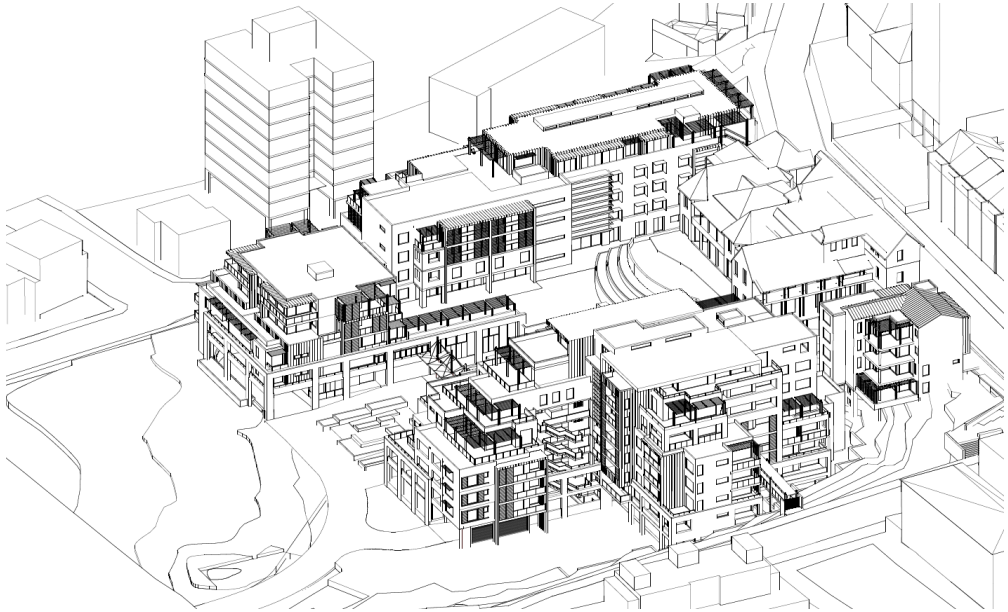


Figure 1: View from the sun, 2pm June 21

For the purpose of calculating the compliance with the control, I have examined sun patches on the relevant glazing line of each apartment. Given the design, the balconies will in most cases enjoy a more favourable sun exposure. The limiting condition is generally self-shading by the privacy walls and/or deeply recessed balconies to comply with minimum dimensions of private open space.

Because of its key importance in the determination of what is 'effective sunlight' for characterisation of compliance, for both glazing and private open space, I refer specifically to the application of the relevant *L+EC Planning Principle (The Benevolent Society v Waverley Council [2010] NSWLEC 1082):*

- I ignore very large angles of incidence to the glazing surface, and unusably small areas of sunlit glazing. I quantify as complying all sun patches of reasonable size.
- I have generally characterised as complying when sun access is over three hours total of partially and fully sunlit glazing between 9am and 3pm mid-winter.

- I quantify all **effective sun** that is demonstrably available to a point of interest, including sun earlier than 9am, or later than 3pm, *but for reporting the achieved compliance, I do not count this additional effective sun.*
- Where appropriate, I note extended periods of sun available to bedrooms, as contributing significantly to the amenity of any apartment that has an otherwise unfavourably oriented living area.

Both latter characterisations are consistent with the interpretation of *the BenSoc Principle (and its predecessor Parsonage Principle)* as previously accepted by the Land and Environment Court, and by various Councils.

5.2.2 Solar access compliance

I tabulate available effective sun in detail. Table 1 shows available sun for all apartments, with shaded cells equal to 30 minutes showing acceptable area of sunlit glazing to Living rooms, and where appropriate a darker shading (un-numbered) showing effective sun to bedrooms. In a few instances, I show a third tone to draw attention to a sunlit private open space, but do not rely on it for quantification.

Floor Level	Unit No.	Orientation	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00
BROWN ST ILU																			
1																			
2	B-01	S-E-W									0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-02	S-E																	
	B-03	S-E																	
	B-04	S-E													0.5	0.5	0.5	0.5	
	B-05	S-E																	
	B-06	E-N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5							
	B-07	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5							
	B-08	N		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
	B-09	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-10	W											0.5	0.5	0.5	0.5	0.5	0.5	
3	B-11	S-E-W									0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-12	S-E																	
	B-13	S-E																	
	B-14	S-E												0.5	0.5	0.5	0.5	0.5	
	B-15	S-E																	
	B-16	E-N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5					
	B-17	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-18	N		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
	B-19	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-20	W												0.5	0.5	0.5	0.5	0.5	
4	B-21	S-E-W									0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-22	S-E																	
	B-23	S-E																	
	B-24	S-E												0.5	0.5	0.5	0.5	0.5	
	B-25	S-E																	
	B-26	E-N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5					
	B-27	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-28	N		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		

Floor Level	Unit No.	Orientation	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00
	B-29	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-30	W												0.5	0.5	0.5	0.5	0.5	
5	B-31	S-E-W								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-32	S-E																	
	B-33	S-E								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-34	S-E											0.5	0.5	0.5	0.5	0.5	0.5	
	B-35	E-N-W		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
	B-36	N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5					
	B-37	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-38	W												0.5	0.5	0.5	0.5	0.5	
6	B-39	S-E-W								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-40	S-E																	
	B-41	S-E																	
	B-42	E-N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-43	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-44	W								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
7	B-45	S-E-W								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-46	S-E																	
	B-47	E-N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-48	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-49	W								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
8	B-50	S-E-W							0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	B-51	E-N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
	B-52	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
9	B-53			D	E	L	E	T	E	D									
	B-54			D	E	L	E	T	E	D									
	B-55			D	E	L	E	T	E	D									
STEPHEN ST ILU																			
1																			
2	S-01	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	S-02	E-N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5						
3	S-03	S-E	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	S-04	S-E	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5						
	S-05	S-E																	
	S-06	S-E							0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
4	S-07	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5					
	S-08	E-N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
5	S-09	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5					
	S-10	E-N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
GATE KEEPERS LODGE ILU																			
1	G-01	N-W								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
2	G-02	N-W								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
3	G-03	N-W								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
4	G-04	N-W							0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
HERITAGE ILU																			

Floor Level	Unit No.	Orientation	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00
1	H-01	N-W	0.5	0.5	0.5	0.5									0.5	0.5	0.5	0.5	
2	H-02	N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5					
	H-03	N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5					
	H-04	N-W	0.5	0.5	0.5	0.5	0.5								0.5	0.5	0.5	0.5	
3	H-05	N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
	H-06	N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5						
	H-07	N-W	0.5	0.5	0.5	0.5	0.5	0.5					0.5	0.5	0.5	0.5	0.5	0.5	
4	H-08	N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5							
	H-09	N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
RACF ILU																			
7	R-01	E-S-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	R-02	E	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	R-03	E-N-W	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	R-04	W					0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	

LEGEND	
0.5	SUNLIGHT TO WINDOW OF LIVING
0.5	SUNLIGHT TO WINDOW OFBEDROOMS ONLY
	SUNLIGHT TO BALCONY/TERRACE

Table 1: Effective sun

Note

- Table 1 records the presence of effective sun at the nominated time, and for the subsequent 30 minute period.
- In characterising compliance applied to some one bedroom dwellings, I consider it appropriate to pay regard to a bedroom contiguous with the adjacent living room, as it affords the occupant ample opportunity to enjoy the intended amenity. I am generally conservative with this characterisation, but consider it an important acknowledgement of the actual sun access for a small apartment. I also separately note sun to *two* bedrooms of larger apartments where a clear choice appeared appropriate, to locate the living area on an unfavourable orientation.
- I do not enter into any argument concerning whether this is a 'closely built up environment'. However, I am of the mind that it is appropriate to admit some dwellings as compliant under the RFDC '2 hour standard', if (as here) *only a small proportion of apartments are projected to receive between two and three hours of effective sun in mid-winter.*

Table 2 summarizes the projected solar access for the residential dwelling units in the development.

Units which achieve 3 hours or more sunlight to Living and POS 9am – 3pm as defined in the RFDC	**50**	**63%**
Units which achieve 2 hours or more sunlight to Living and POS 9am – 3pm as defined in the RFDC	**58**	**73.4%**
Units which achieve 3 hours or more sunlight *taking account of contiguous bedrooms*	**55**	**69.6%**
Units which achieve 2 hours or more sunlight *taking account of contiguous bedrooms*	**59**	**74.7%**

Table 2: Summary of solar access for units

5.0 SUMMARY AND CONCLUSION

5.1 Solar access to glazing and private open space

50 apartments (63%) are projected to achieve at least ***3 hours of effective sun access to living area glazing and private open space between 9am and 3pm on June 21.***

A further eight apartments (10.4%) are projected to achieve greater than 2 hours. Because of the density of the surrounding context and the proposed development, I consider it legitimate under the broad intents of the RFDC to add these apartment to those complying by strict interpretation of the Rule of Thumb, the more especially as the majority of the apartments thus characterized as complying actually enjoy mid-winter sun well in excess of the nominated '3 hour standard'.

Alternatively, if one takes account of effective sun to bedrooms for apartments where the living space may not be as favourably oriented, 55 out of 79 dwellings, being a 69.6% of the apartments could be described as complying at the minimum 3 hour standard, and a total of 59 dwellings (74.7%) including the additional apartments with over 2 hours of direct sun.

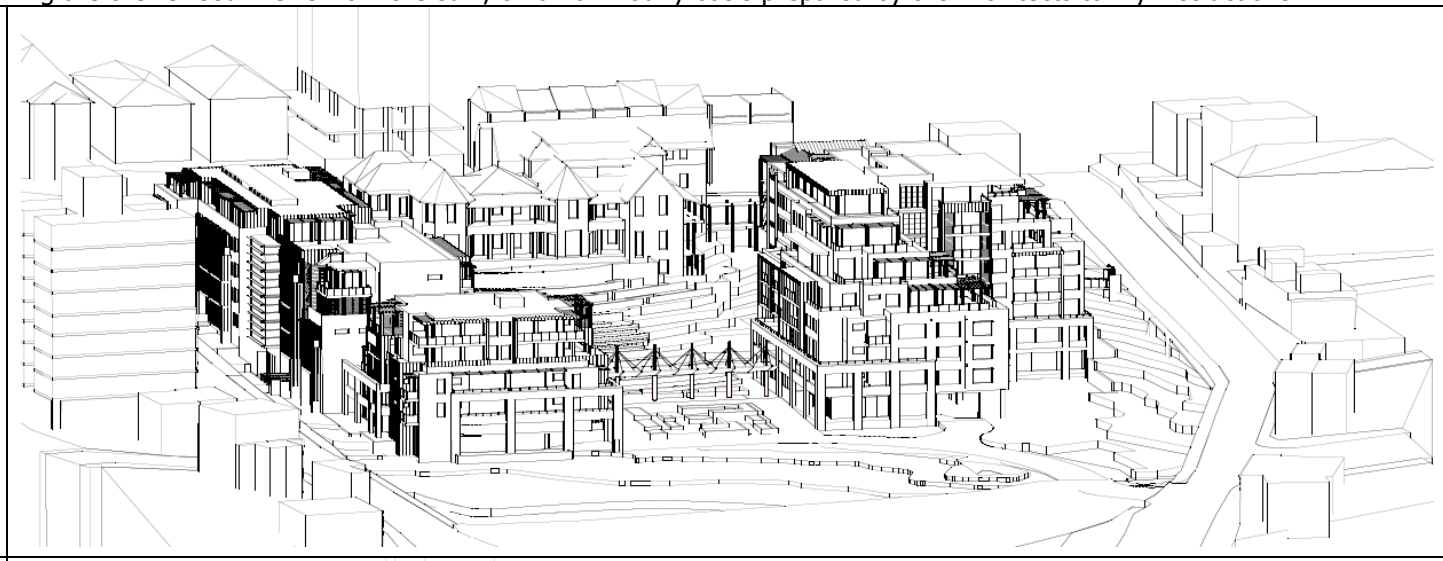
In my considered opinion, the total proportion of apartments that may be characterised as complying with the performance requirements of the RFDC is over 73%, where a minimum of 70% is required by that code.

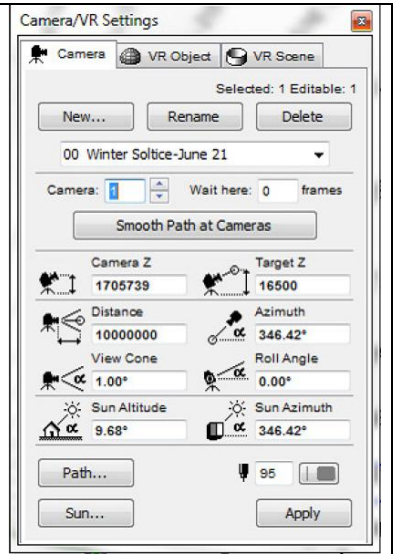
In addition, some apartments not characterized as complying do have a lesser quantum of sun access on June 21.

A.0 APPENDIX: VIEWS FROM THE SUN

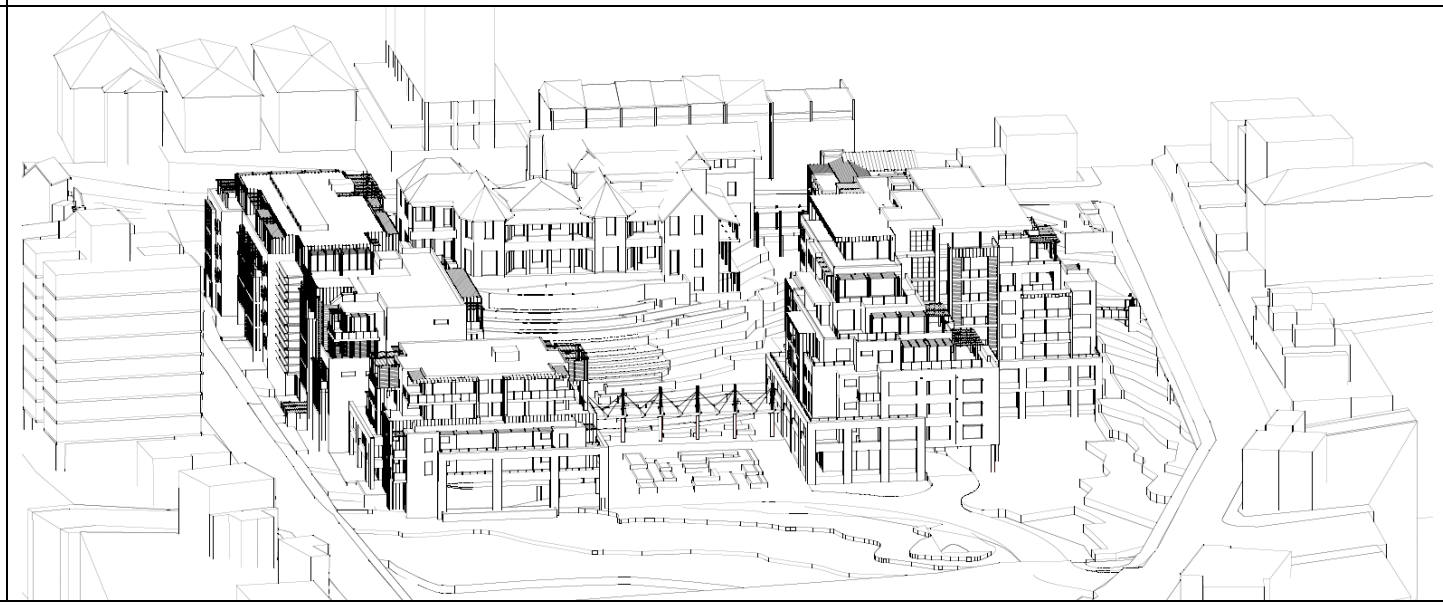
The following are the revised 'views from the sun', on a half-hourly basis prepared by the Architects to my instructions.

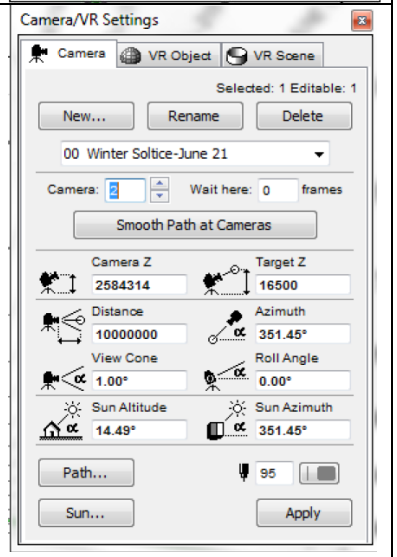
8



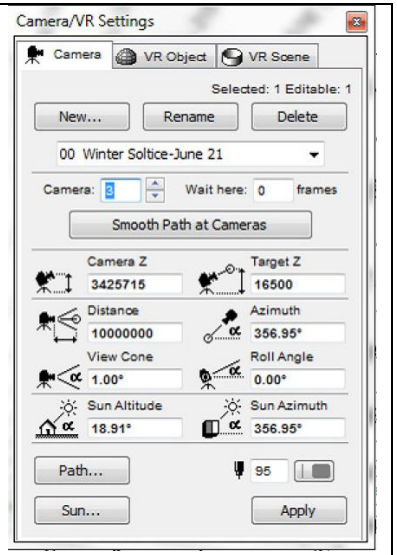


8.30





9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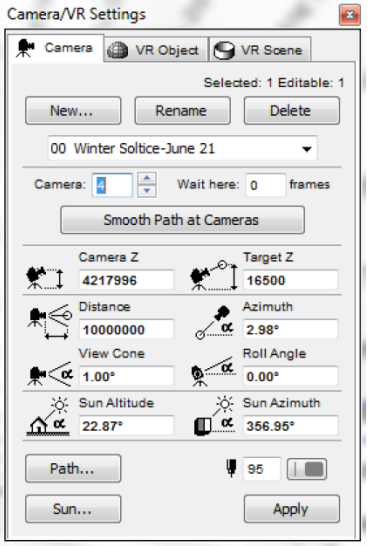
Camera
VR Object
VR Scene
Selected: 1 Editable: 1
New...
Rename
Delete
00 Winter Soltice-June 21
Camera: 3
Wait here: 0 frames
Smooth Path at Cameras
Camera Z
3425715
Target Z
16500
Distance
10000000
Azimuth
356.95°
View Cone
1.00°
Roll Angle
0.00°
Sun Altitude
18.91°
Sun Azimuth
356.95°
Path...
95
Sun...
Apply

9.30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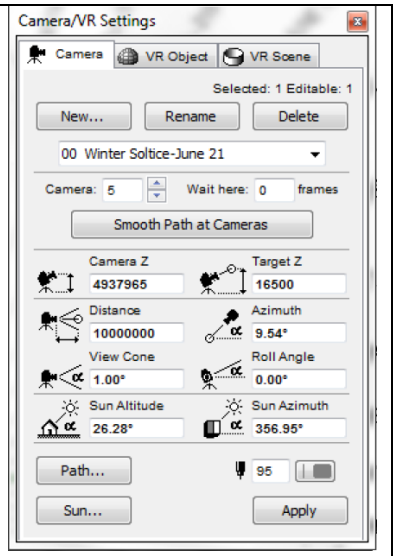
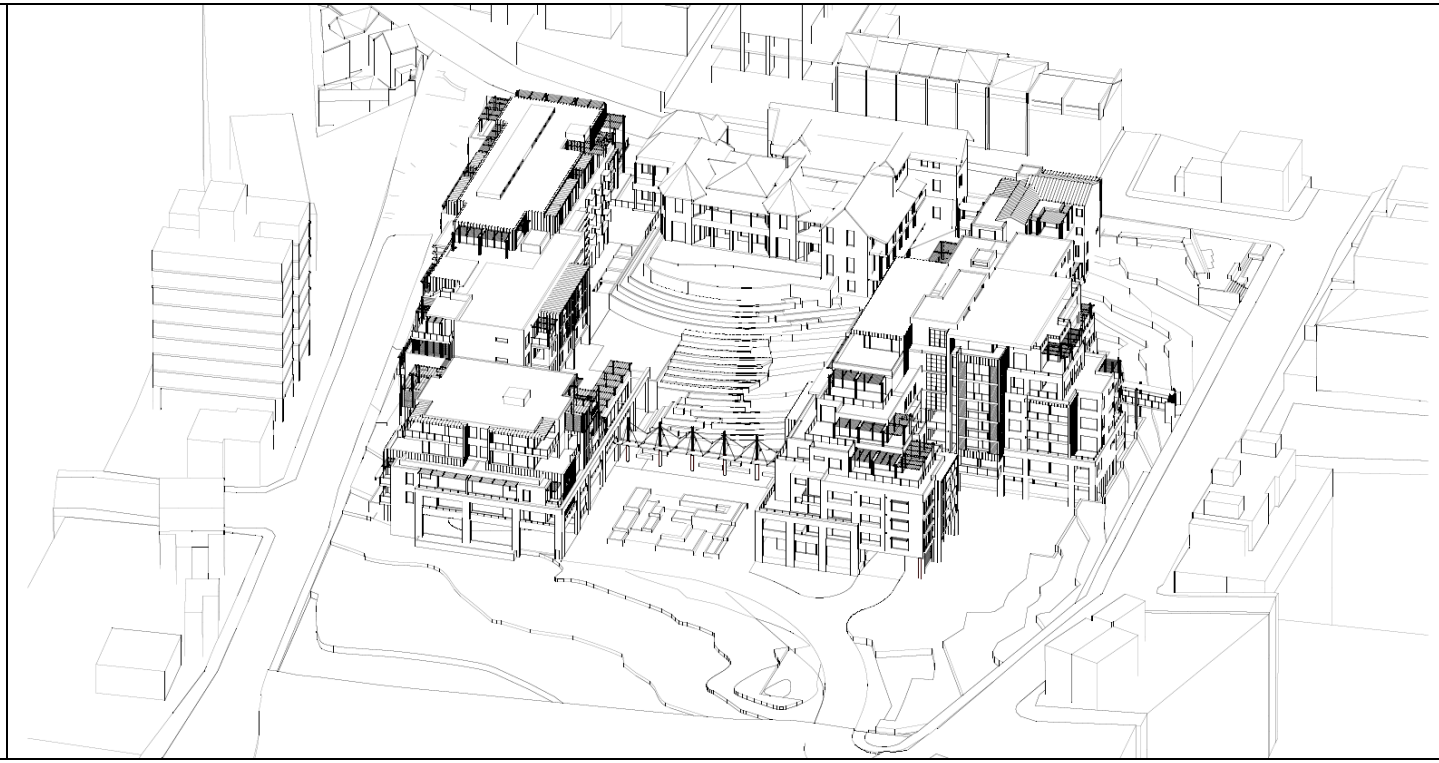
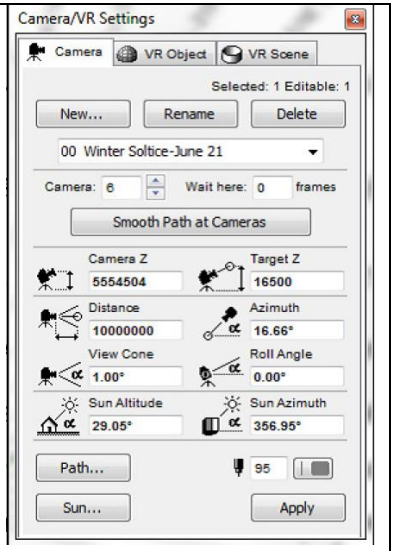
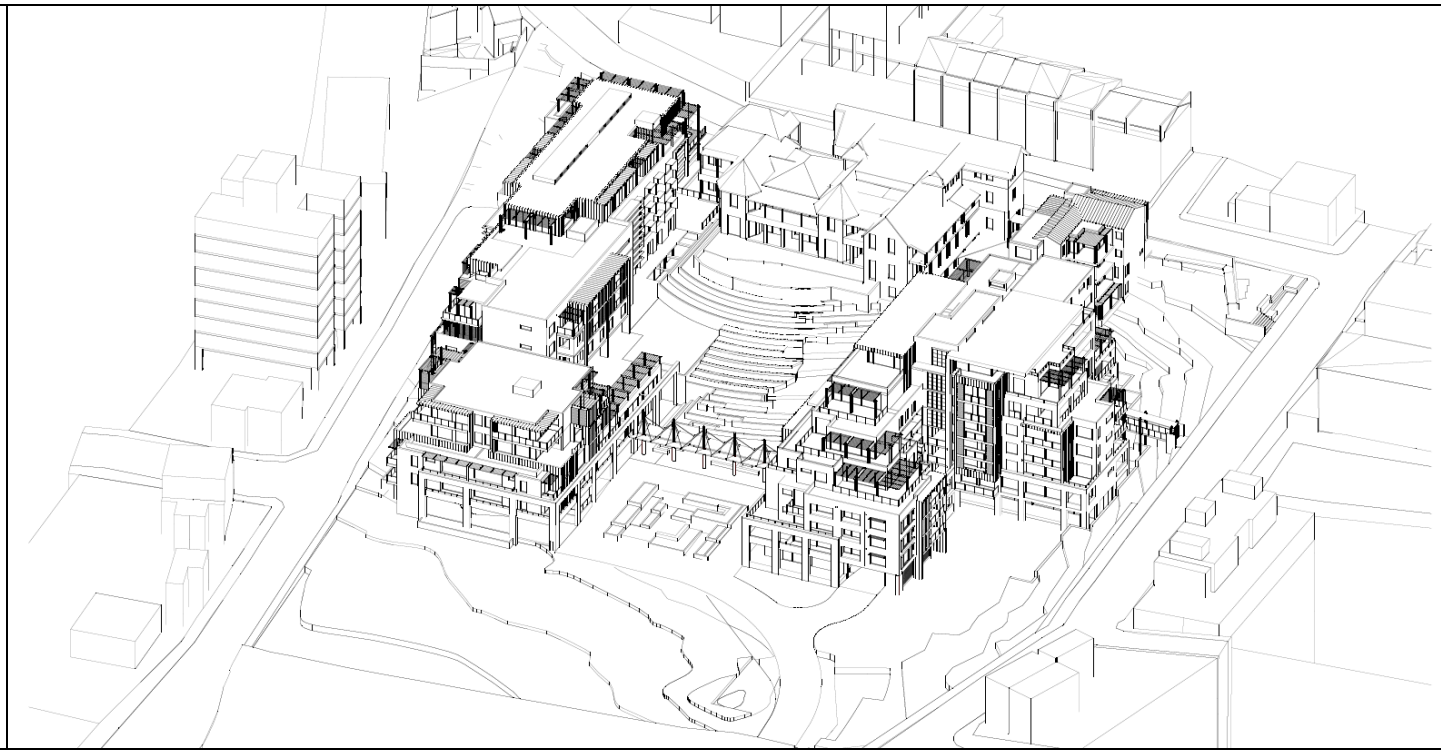
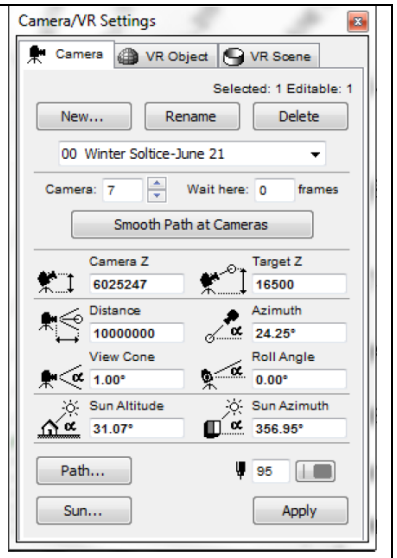
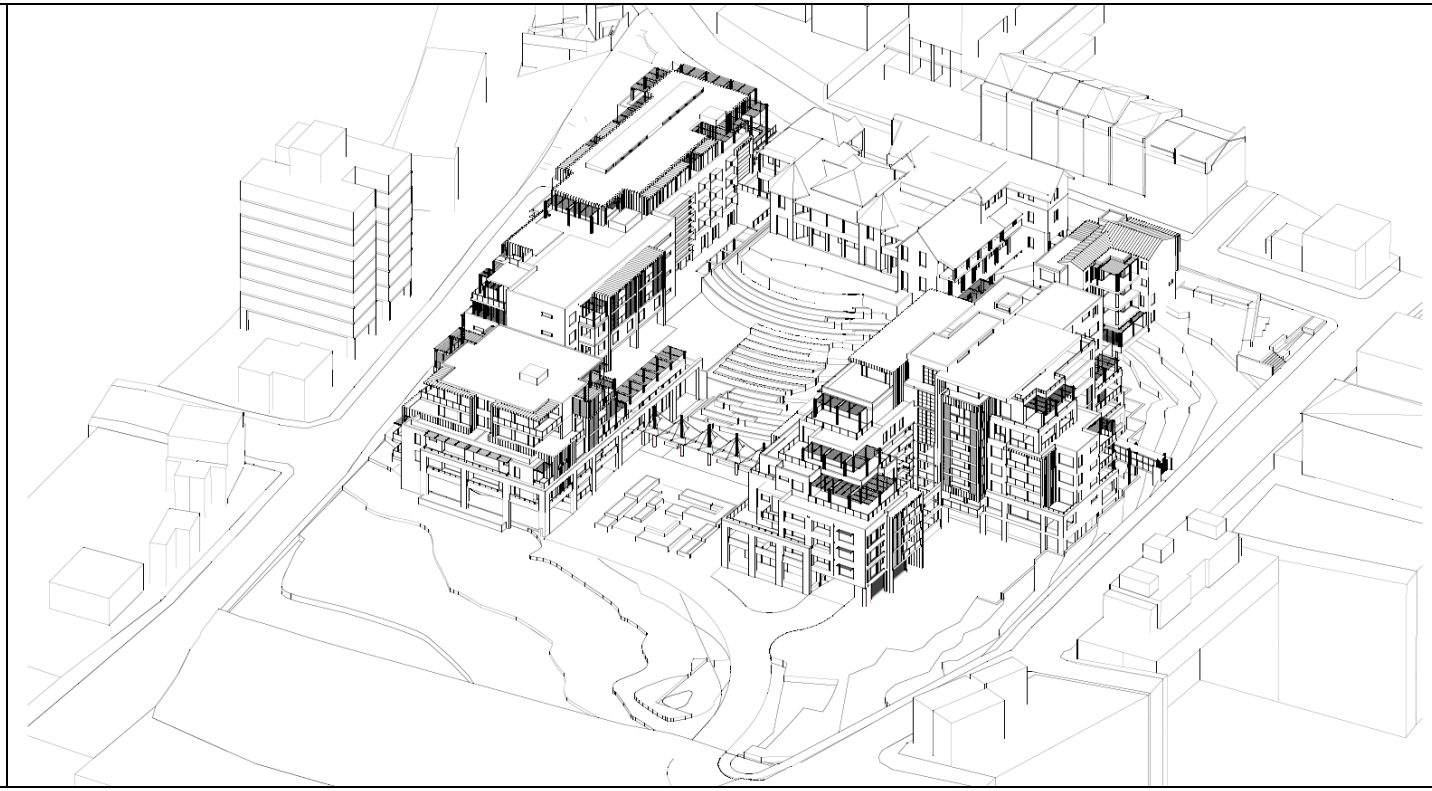
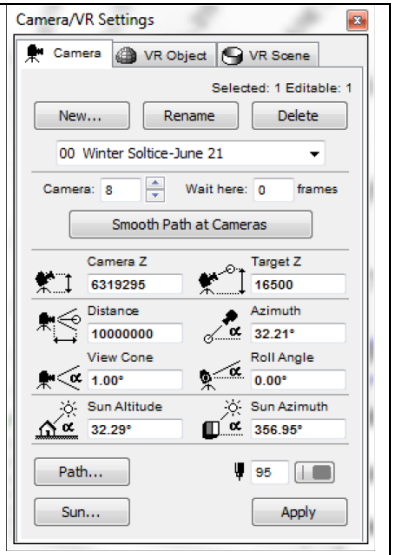
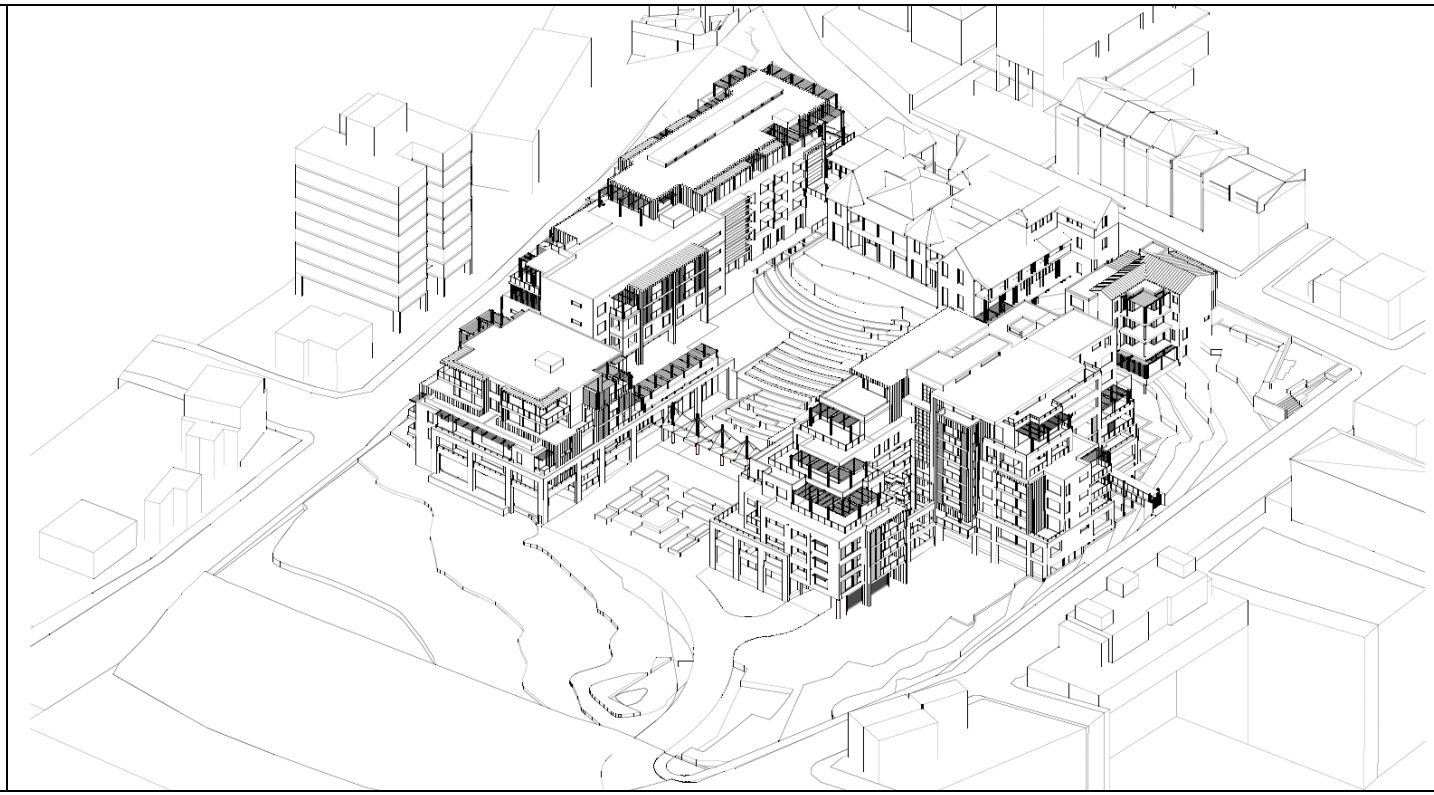
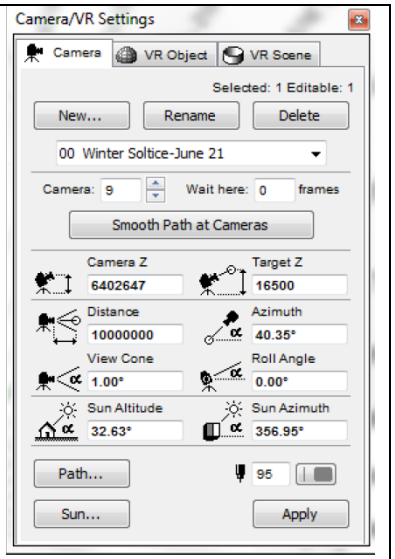
Rename
Delete
00 Winter Soltice-June 21
Camera: 4
Wait here: 0 frames
Smooth Path at Cameras
Camera Z
4217996
Target Z
16500
Distance
10000000
Azimuth
2.98°
View Cone
1.00°
Roll Angle
0.00°
Sun Altitude
22.87°
Sun Azimuth
356.95°
Path...
95
Sun...
Apply

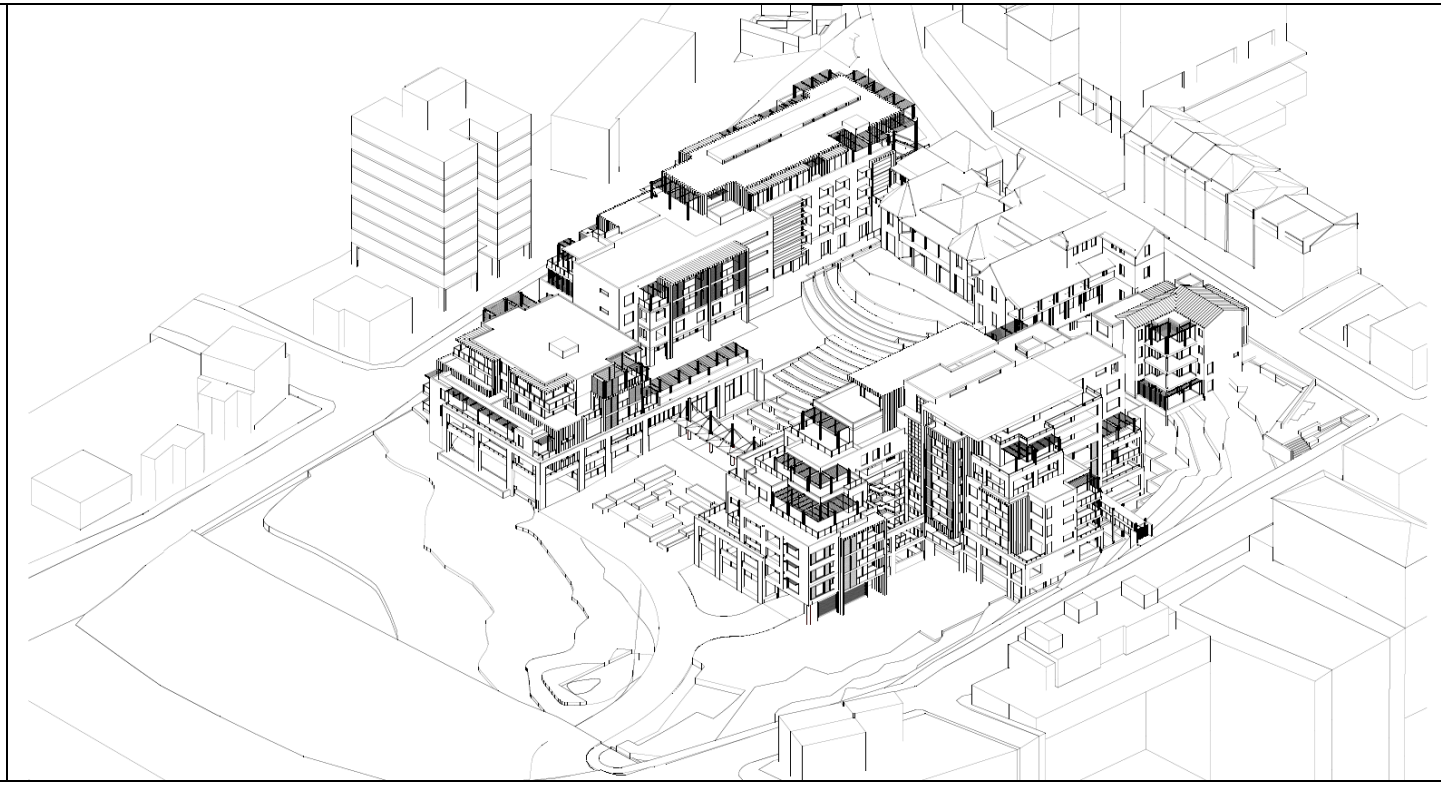
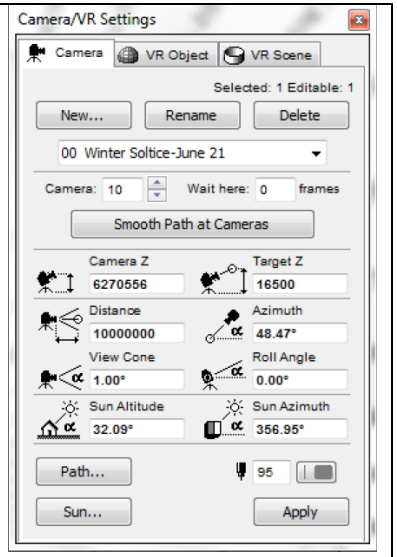
10		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 5 Wait here: 0 frames Smooth Path at Cameras Camera Z 4937965 Target Z 16500 Distance 10000000 Azimuth 9.54° View Cone 1.00° Roll Angle 0.00° Sun Altitude 26.28° Sun Azimuth 356.95° Path... 95 Sun... Apply

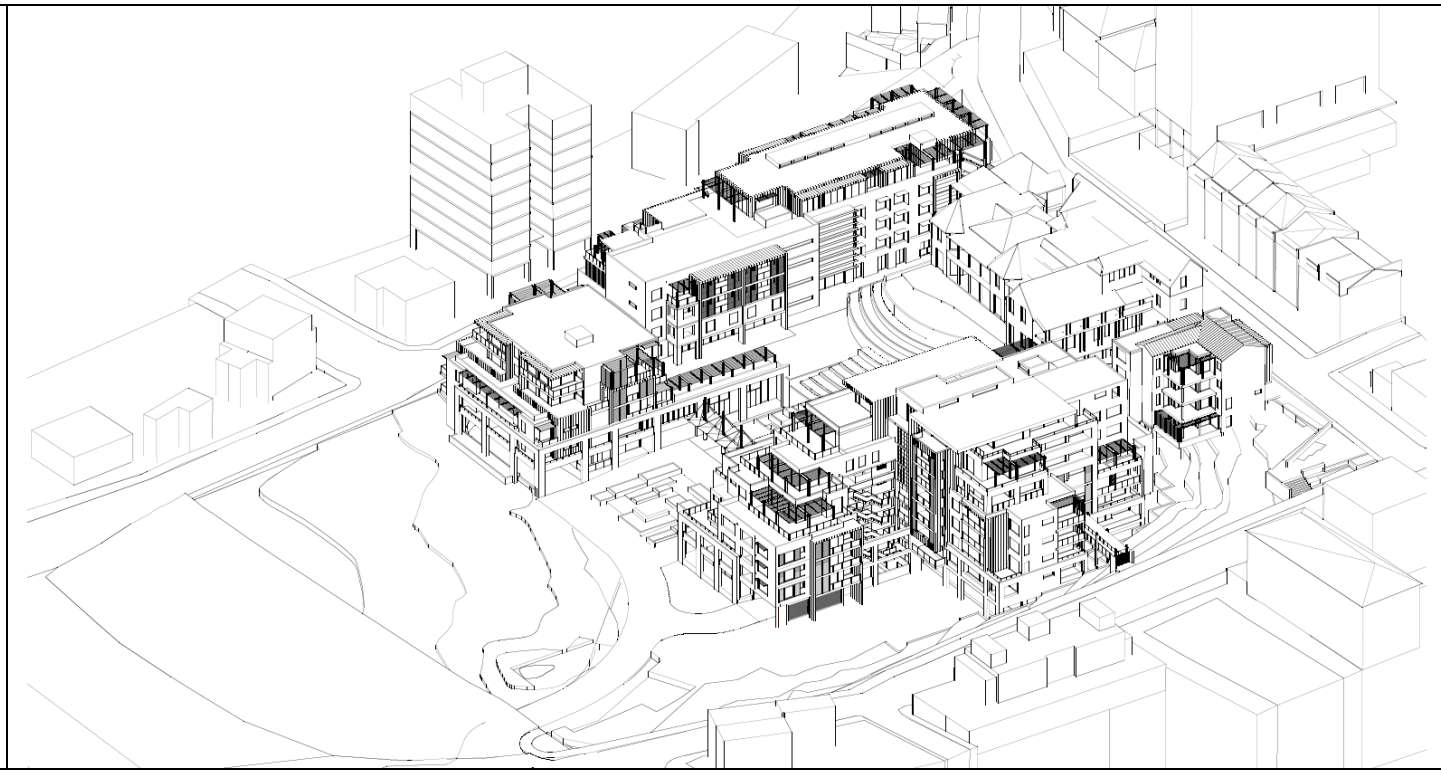
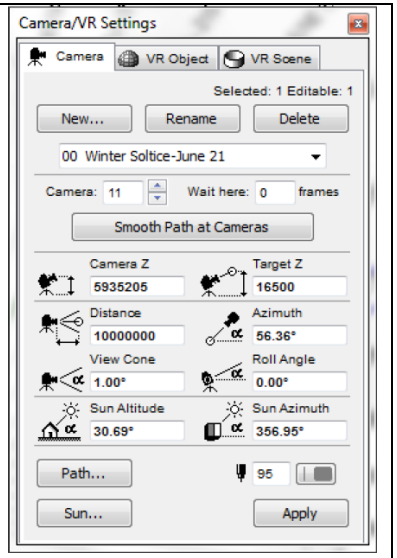
10.30		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 6 Wait here: 0 frames Smooth Path at Cameras Camera Z 5554504 Target Z 16500 Distance 10000000 Azimuth 16.66° View Cone 1.00° Roll Angle 0.00° Sun Altitude 29.05° Sun Azimuth 356.95° Path... 95 Sun... Apply

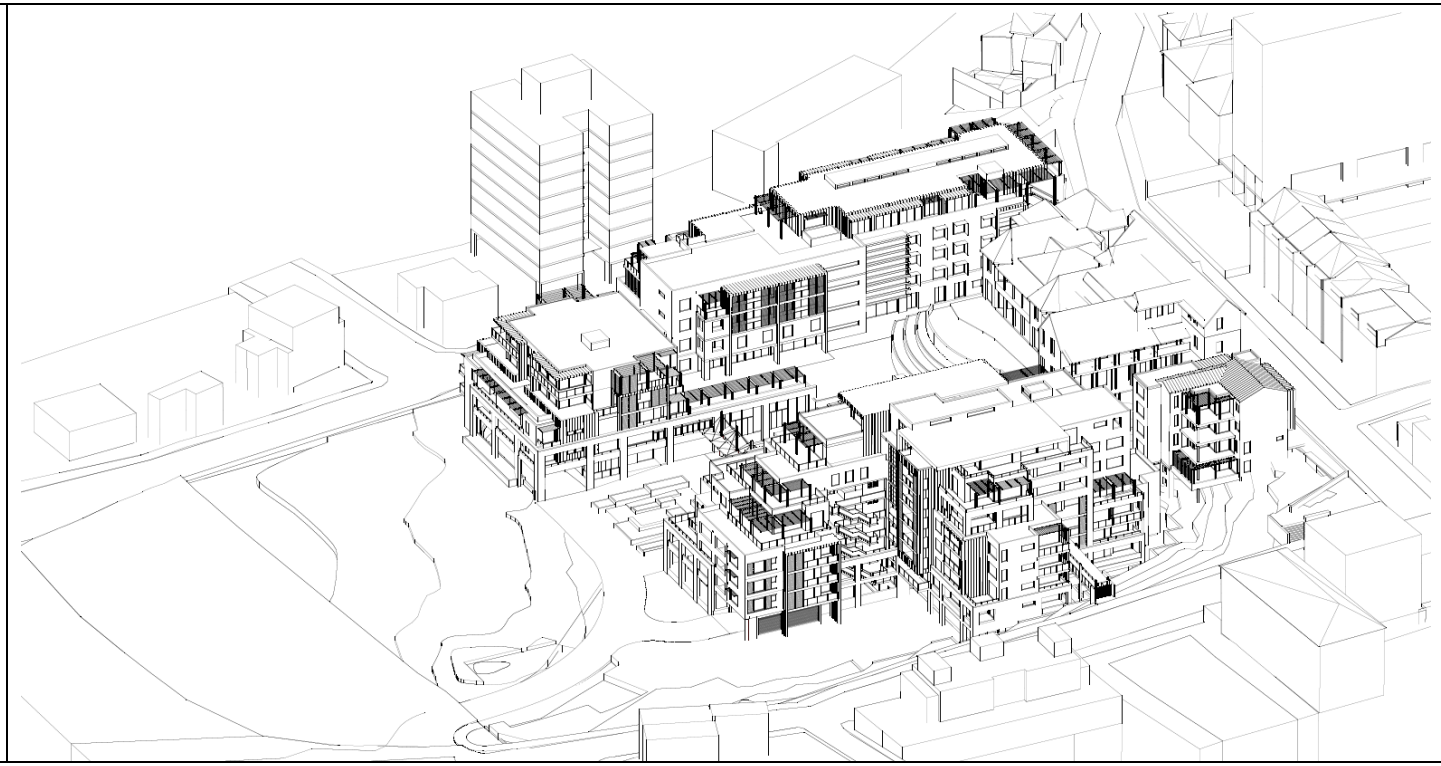
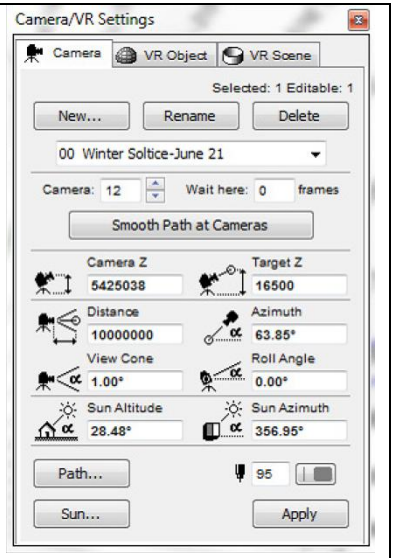
11		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 7 Wait here: 0 frames Smooth Path at Cameras Camera Z 6025247 Target Z 16500 Distance 10000000 Azimuth 24.25° View Cone 1.00° Roll Angle 0.00° Sun Altitude 31.07° Sun Azimuth 356.95° Path... 95 Sun... Apply

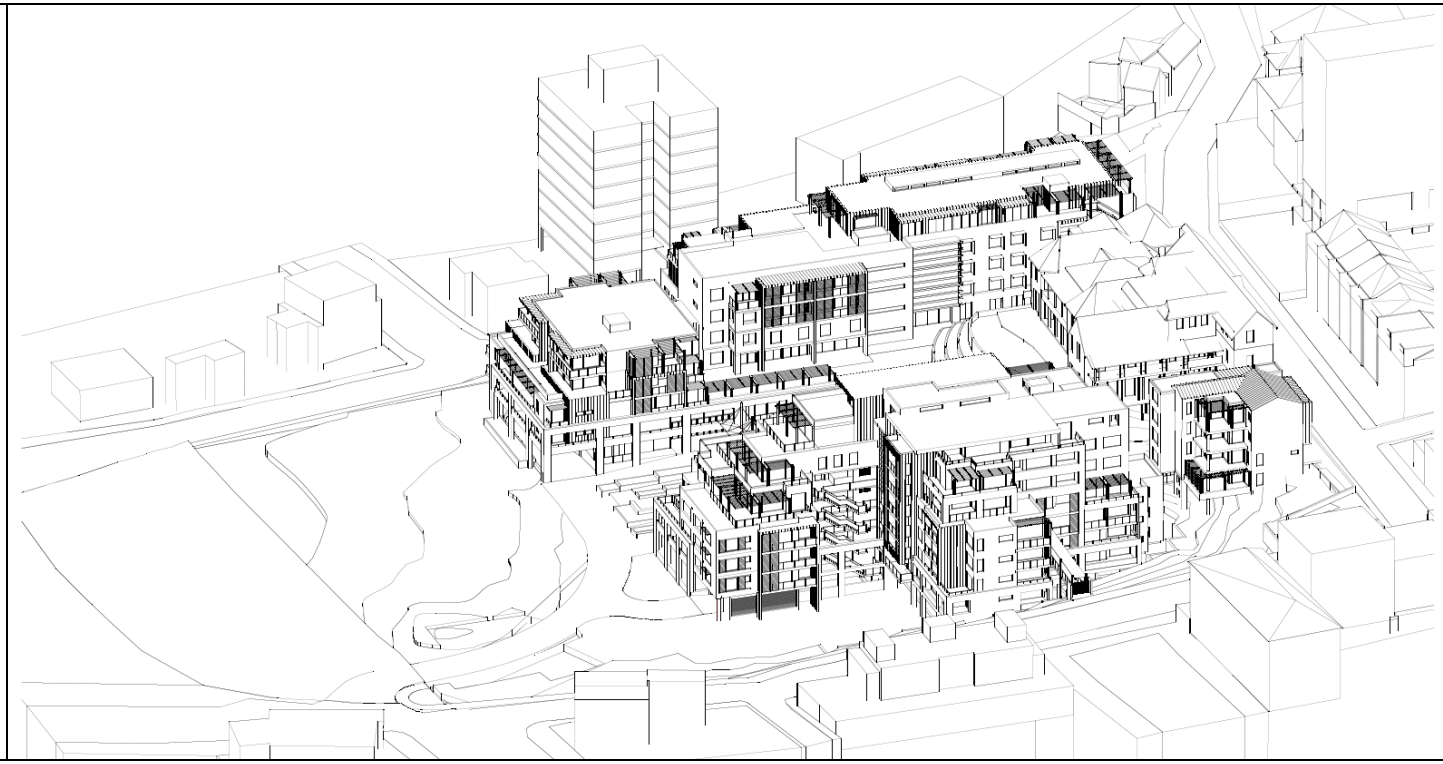
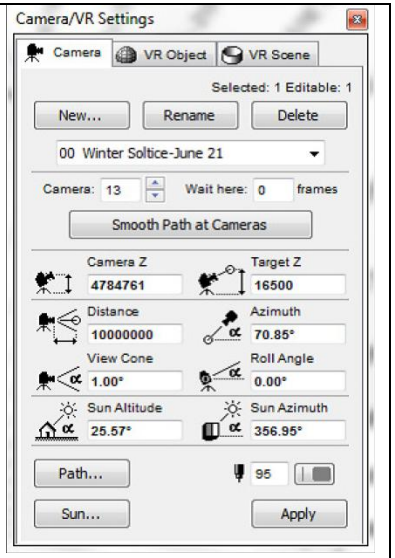
11.30		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 8 Wait here: 0 frames Smooth Path at Cameras Camera Z 6319295 Target Z 16500 Distance 10000000 Azimuth 32.21° View Cone 1.00° Roll Angle 0.00° Sun Altitude 32.29° Sun Azimuth 356.95° Path... 95 Sun... Apply

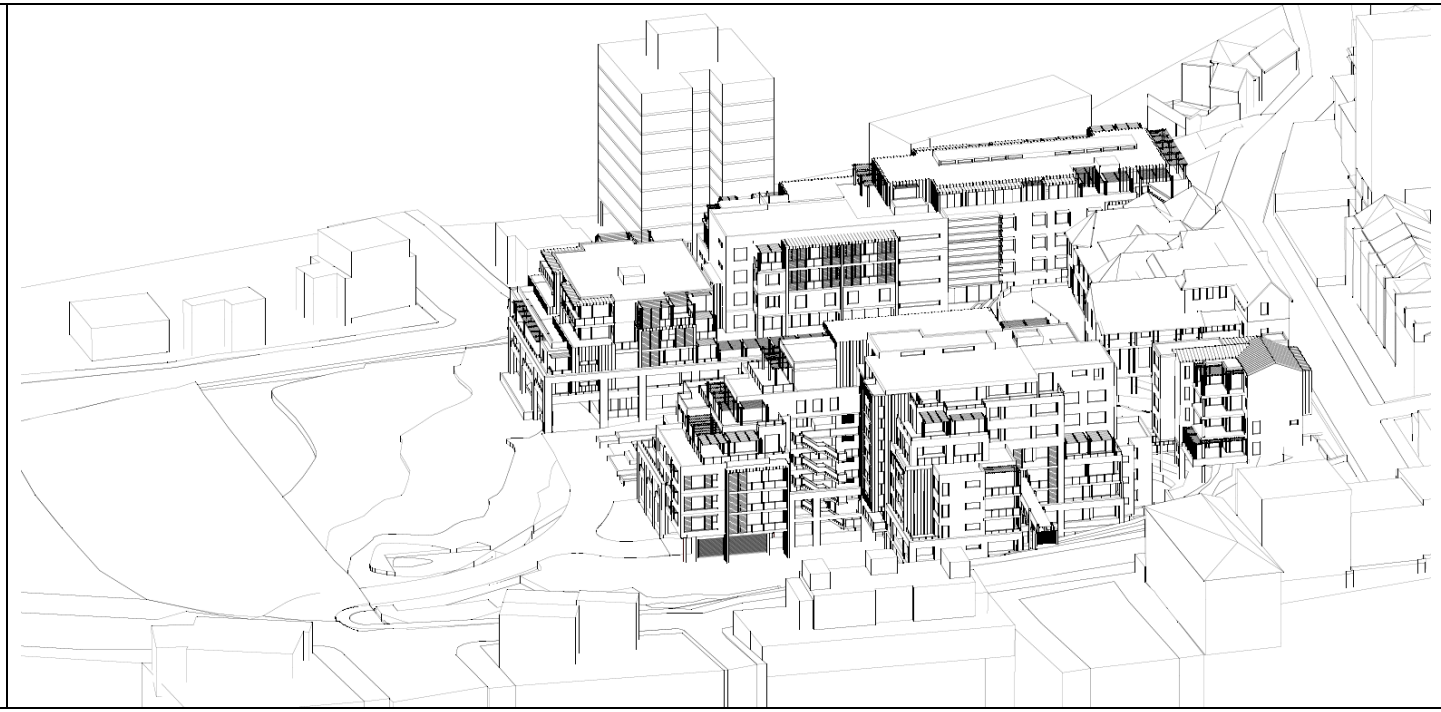
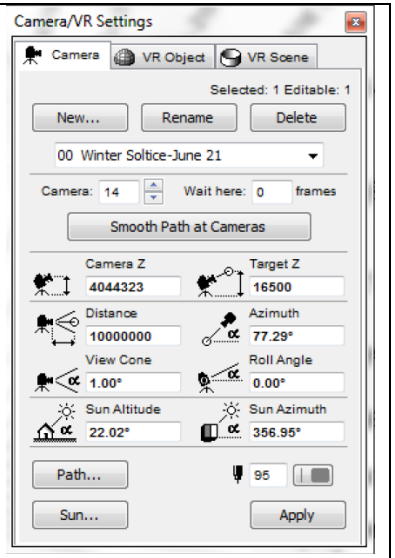
12		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 9 Wait here: 0 frames Smooth Path at Cameras Camera Z 6402647 Target Z 16500 Distance 10000000 Azimuth 40.35° View Cone 1.00° Roll Angle 0.00° Sun Altitude 32.63° Sun Azimuth 356.95° Path... 95 Sun... Apply

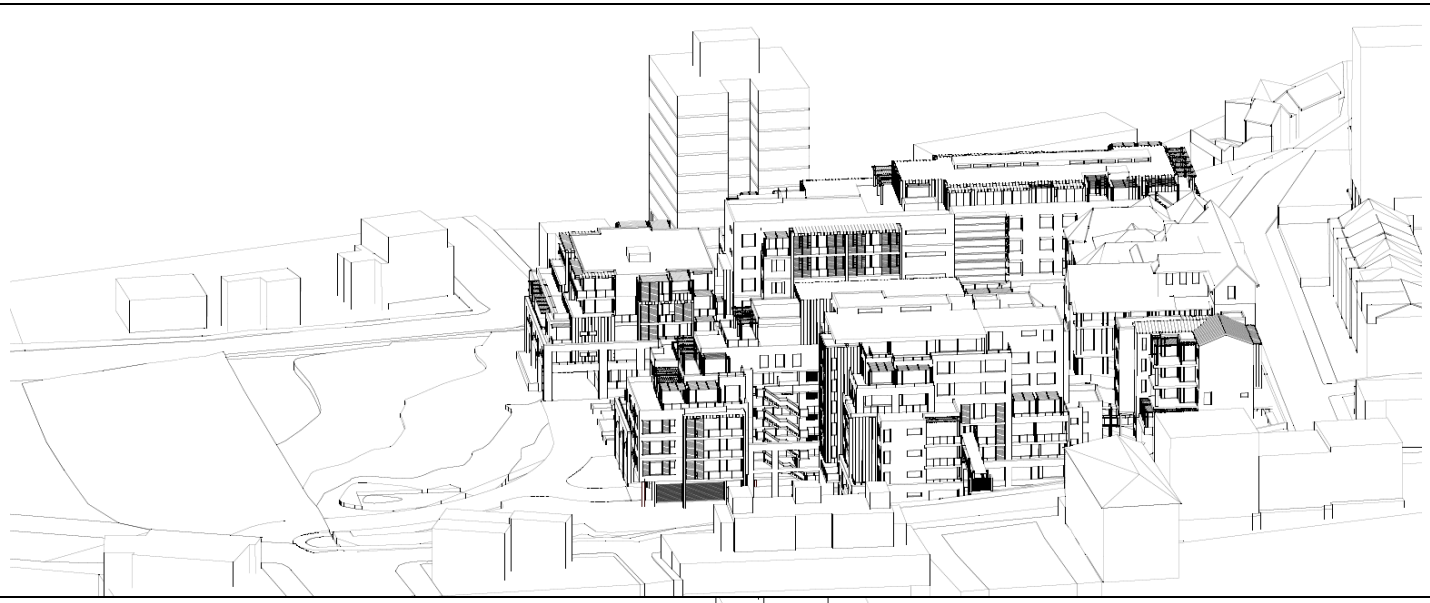
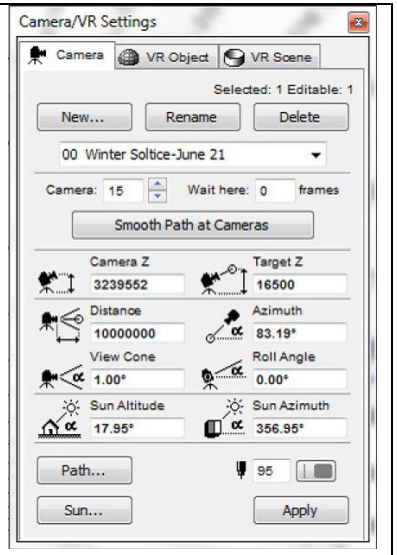
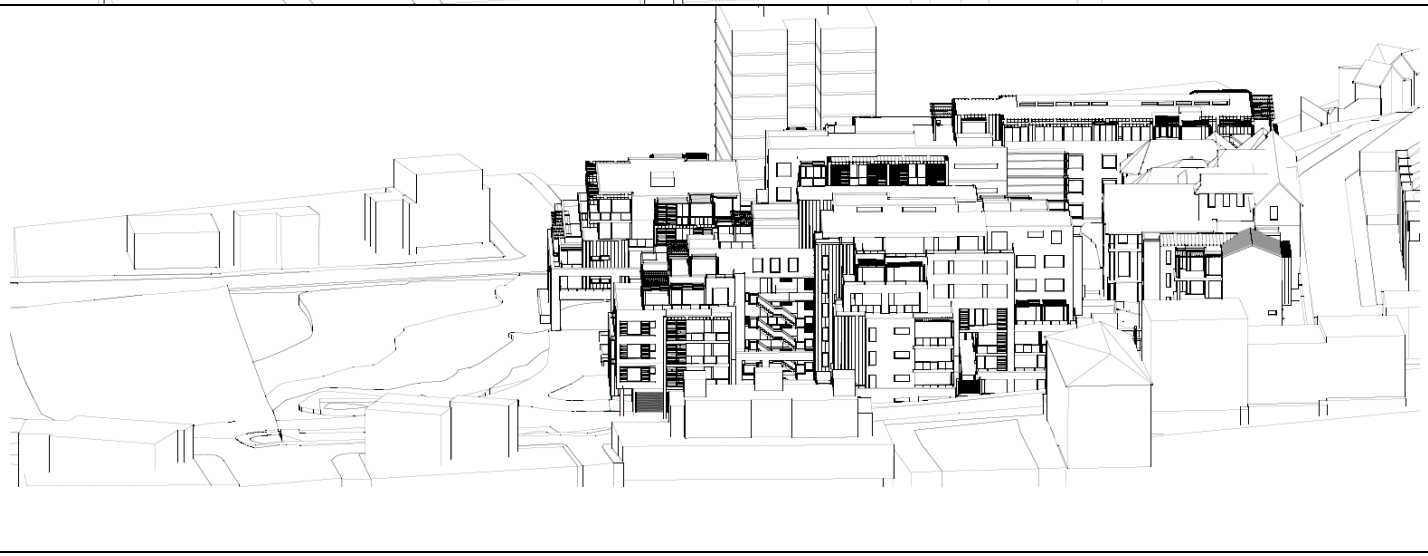
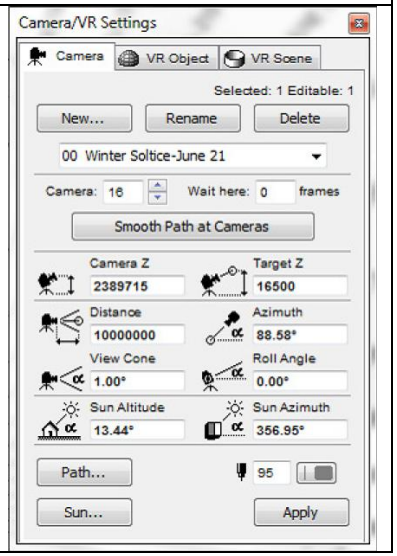
12.30		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 10 Wait here: 0 frames Smooth Path at Cameras Camera Z 6270556 Target Z 16500 Distance 10000000 Azimuth 48.47° View Cone 1.00° Roll Angle 0.00° Sun Altitude 32.09° Sun Azimuth 356.95° Path... 95 Sun... Apply

1		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 11 Wait here: 0 frames Smooth Path at Cameras Camera Z 5935205 Target Z 16500 Distance 10000000 Azimuth 56.36° View Cone 1.00° Roll Angle 0.00° Sun Altitude 30.69° Sun Azimuth 356.95° Path... 95 Sun... Apply

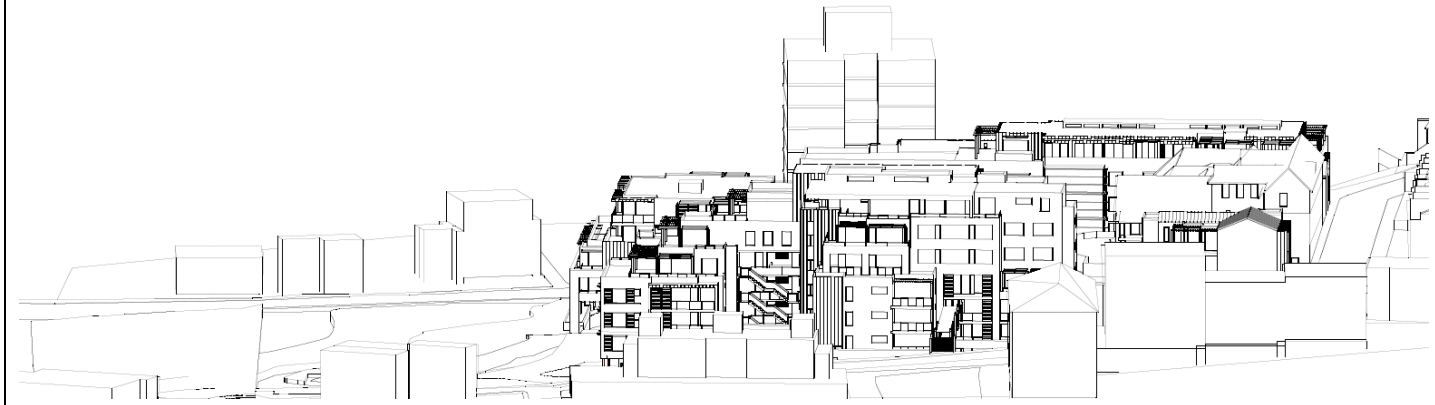
1.30		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 12 Wait here: 0 frames Smooth Path at Cameras Camera Z 5425038 Target Z 16500 Distance 10000000 Azimuth 63.85° View Cone 1.00° Roll Angle 0.00° Sun Altitude 28.48° Sun Azimuth 356.95° Path... 95 Sun... Apply

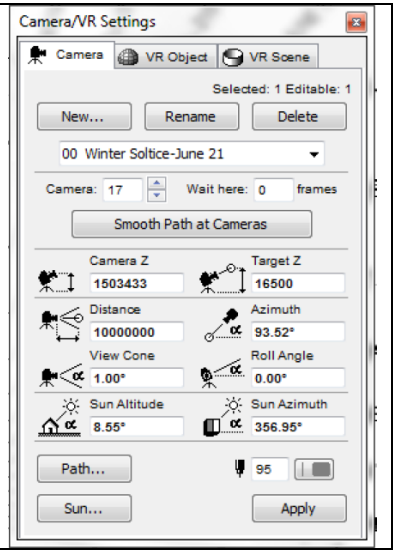
2		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 13 Wait here: 0 frames Smooth Path at Cameras Camera Z 4784761 Target Z 16500 Distance 10000000 Azimuth 70.85° View Cone 1.00° Roll Angle 0.00° Sun Altitude 25.57° Sun Azimuth 356.95° Path... 95 Sun... Apply

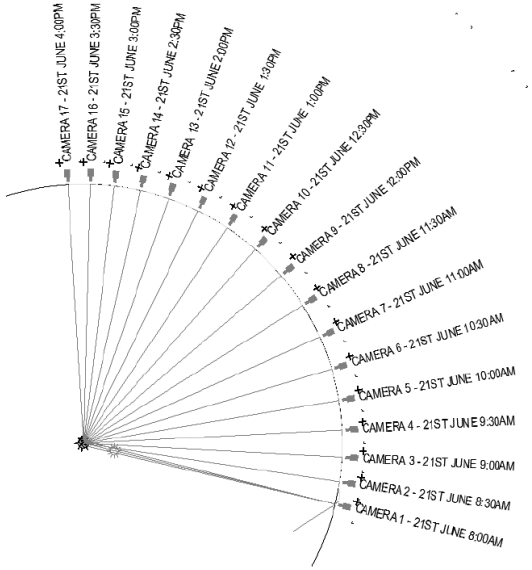
2.30		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 14 Wait here: 0 frames Smooth Path at Cameras Camera Z 4044323 Target Z 16500 Distance 10000000 Azimuth 77.29° View Cone 1.00° Roll Angle 0.00° Sun Altitude 22.02° Sun Azimuth 356.95° Path... 95 Sun... Apply

3		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 15 Wait here: 0 frames Smooth Path at Cameras Camera Z 3239552 Target Z 16500 Distance 10000000 Azimuth 83.19° View Cone 1.00° Roll Angle 0.00° Sun Altitude 17.95° Sun Azimuth 356.95° Path... 95 Sun... Apply
3.30		 Camera/VR Settings Camera VR Object VR Scene Selected: 1 Editable: 1 New... Rename Delete 00 Winter Soltice-June 21 Camera: 16 Wait here: 0 frames Smooth Path at Cameras Camera Z 2389715 Target Z 16500 Distance 10000000 Azimuth 88.58° View Cone 1.00° Roll Angle 0.00° Sun Altitude 13.44° Sun Azimuth 356.95° Path... 95 Sun... Apply

4




Camera/VR Settings
Camera
VR Object
VR Scene
Selected: 1 Editable: 1
New...
Rename
Delete
00 Winter Soltice-June 21
Camera: 17
Wait here: 0
frames
Smooth Path at Cameras
Camera Z
1503433
Target Z
16500
Distance
10000000
Azimuth
93.52°
View Cone
1.00°
Roll Angle
0.00°
Sun Altitude
8.55°
Sun Azimuth
356.95°
Path...
95
Sun...
Apply


CAMERA 17 - 21ST JUNE 4:00PM
CAMERA 16 - 21ST JUNE 3:30PM
CAMERA 15 - 21ST JUNE 3:00PM
CAMERA 14 - 21ST JUNE 2:30PM
CAMERA 13 - 21ST JUNE 2:00PM
CAMERA 12 - 21ST JUNE 1:30PM
CAMERA 11 - 21ST JUNE 1:00PM
CAMERA 10 - 21ST JUNE 12:30PM
CAMERA 9 - 21ST JUNE 12:00PM
CAMERA 8 - 21ST JUNE 11:30AM
CAMERA 7 - 21ST JUNE 11:00AM
CAMERA 6 - 21ST JUNE 10:30AM
CAMERA 5 - 21ST JUNE 10:00AM
CAMERA 4 - 21ST JUNE 9:30AM
CAMERA 3 - 21ST JUNE 9:00AM
CAMERA 2 - 21ST JUNE 8:30AM
CAMERA 1 - 21ST JUNE 8:00AM