



global environmental solutions

Epping Park Stage 3
61 Mobbs Lane Epping
Solar Access Study

Report Number 610.11592-R2

25 March 2013

Meriton Apartments Pty Ltd - Sydney
Level 11, Meriton Tower
528 Kent Street
SYDNEY NSW 2000

Version: Revision 1

Epping Park Stage 3

61 Mobbs Lane Epping

Solar Access Study

PREPARED BY:

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
2 Lincoln Street Lane Cove NSW 2066 Australia

(PO Box 176 Lane Cove NSW 1595 Australia)
T: 61 2 9428 8100 F: 61 2 9427 8200
E: sydney@slrconsulting.com www.slrconsulting.com

This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the Client. Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Meriton Apartments Pty Ltd - Sydney. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR Consulting.

SLR Consulting disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
610.11592-R2	Revision 1	16 August 2012	Peter Hayman	Sophie Wong Kai In	Neihad Al-Khalidy
610.11592-R2	Revision 0	13 August 2012	Peter Hayman	Neihad Al-Khalidy	Neihad Al-Khalidy

Executive Summary

SLR Consulting Pty Ltd (SLR) has been commissioned by Meriton Apartments Pty Ltd (Meriton) to prepare a Solar Access Study for the residential buildings 11 to 17 in Epping Park Stage 3 development.

The State Environmental Planning Policy (SEPP) 65 supported by the Residential Flat Design Code - Part 03 Building Design, 'Rules of Thumb' is relevant to the assessment of the daylight access into residential components of the proposed development. The above regulation states that:

- Living rooms and private open spaces for at least 70 % in a development should receive a minimum of three hours of direct sunlight between 9.00 am and 3.00 pm in mid winter. In dense urban areas a minimum of two hours may be acceptable.

Specific interest therefore lies in the solar access through the living areas windows and balconies of residential apartment of the proposed development during the winter solstice, June 21 between the hours of 9.00 am and 3.00 pm. Due to the low density population of mid to high rise buildings in Epping, the proposed development is required to comply with the minimum of three hours of direct sunlight to at least 70% of the living rooms and private open spaces in the development.

Using the latest 3D AutoCAD drawings package, sun's eye view diagrams were generated for each 15 minute interval between 9.00 am and 3.00 pm on the Winter Solstice (21 June)

On the basis of the current Solar Access Analysis of the development, SLR has concluded the following:

- The proposed development was found to provide 71.1 % of the residential development with 3 hrs or more sunlight on the Winter Solstice, between the hours of 9.00 am to 3.00 pm at a 'sampling rate' of 15 minute intervals.

Table of Contents

1	INTRODUCTION	5
1.1	Site Description	5
1.2	Stage 3 Development Description	6
2	SOLAR ACCESS TO RESIDENTIAL BUILDINGS	8
2.1	Daylighting Considerations	8
2.2	Solar Access Analysis	8
2.2.1	9.00 am – 3.00 pm on the Winter Solstice 21 June	8
3	CONCLUSION	9

TABLES

Table 1	Solar Access Summary for each Residential Building within the Stage 3 Development between 9.00am to 3.00pm on June 21	8
---------	---	---

FIGURES

Figure 1	Proposed Site Location	5
Figure 2	Proposed Stage 3 Masterplan	6

APPENDICES

Appendix A	June 21 Sun Eye Views
------------	-----------------------

1 INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR) has been commissioned by Meriton Apartments Pty Ltd (Meriton) to prepare a Solar Access Study for the residential building 11, 12, 13-14, 15-16 and 17 of Stage 3 of Epping Park Site on 61 Mobbs Lane, Epping. 3D AutoCAD software is utilised to produce daylight access diagrams used for this study.

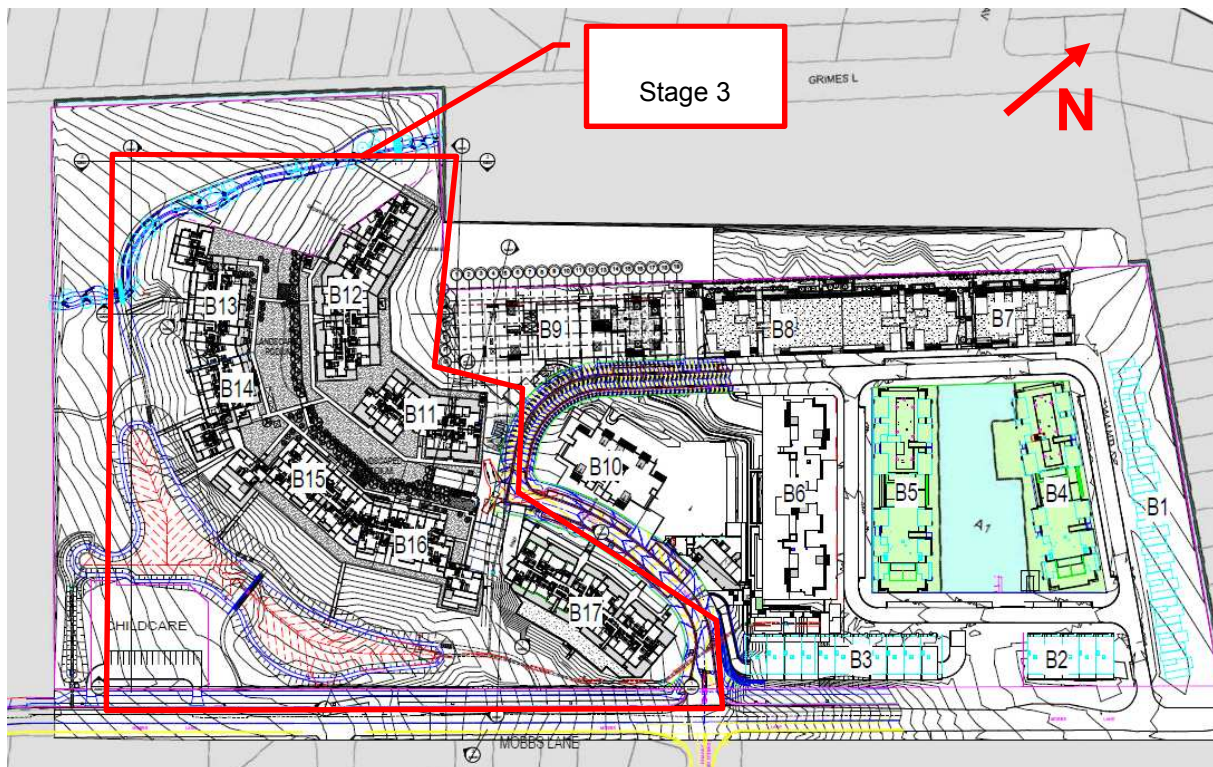
1.1 Site Description

The proposed Epping Park site is shown in **Figure 1**. The Stage 3 of the development is at the western part of the site. The proposed development is bounded by Mobbs Lane to the south, Ryde TAFE complex to the north and low rise residential premises to the east and south.

Figure 1 Proposed Site Location



Figure 2 Proposed Stage 3 Masterplan



1.2 Stage 3 Development Description

The following changes that been made to the August 2012 design:

Building 12

- The footprint of Building 12 has been cut back to be contained within the residential zone. A total of 6 units have been removed from this area.
- Convert a large 3 bedroom unit on Level 5 of Building 12 into 2 x 2 bedroom units to recover 1 of the 6 units cut back from the open space zone.
- Adjust the roof alignment over Building 12 to reflect the changes to the footprints below..
- Façade changes to Building 12 to reflect the cut back of the footprint from the open space zone..

Building 13 and 14

Three units have been added to Building 13 and 14 without any change to the concept plan or building height to recover the loss of units in Building 12. The details are provided below.

- Large 3 bedroom units on Level 2 have been converted into 2 x 2 bedroom units.
- The central 3 bedroom unit on Level 5 has been converted into 2 x 2 bedroom units

Building 15 and 16

Two units have been added to Building 15 and 16 to recover the loss of units in Building 12. The details are provided below.

- Two 3 bedroom unit has been added to the roof level to that part of Building 15-16 that is currently 2 storeys in height. This increases the number of storeys to 3 and remains compliant with the height control of the approved concept plan, which allows 4 storeys in this location.

Building 17

One unit located on Level 3 have been relocated from the eastern side to the western side of Building 17. This will make the height of the building being within in the 3 storey zoning of the Majo Development SEPP. One unit on Level 3 has been deleted/

Stage 3 now comprises of the following buildings:

- Building 11 is located on the north perimeter of Stage 3 site and west to "Stage 2 Building 10". Building 11 comprises of:
 - 5 levels of residential apartments (47 apartments)
- Building 12 is located on the northwest perimeter of Stage 3 site. Building 12 consists of:
 - 5 levels of residential apartments (78 apartments)
- Building 13-14 is located southwest to building 12 on the southwest boundary of Stage 3 site. Building 13-14 comprises of:
 - Swimming pool on the lower ground floor
 - 7 levels of residential apartments including lower ground level with four apartments (71 apartments)
- Building 15-16 is located south to building 11 on the south boundary of Stage 3 site. Building 15-16 comprises of:
 - 2 basement levels capark
 - 8 levels of residential apartments including 2 lower ground levels with four apartments on each (85 apartments)
- Building 17 is on the east part of Stage 3 site. Building 17 comprises of:
 - 4 levels of residential apartments (41 apartments)

Error! Reference source not found. shows north perspective view of the 3D AutoCAD model of the proposed Stage 3 development at Mobbs Lane.

2 SOLAR ACCESS TO RESIDENTIAL BUILDINGS

2.1 Daylighting Considerations

The State Environmental Planning Policy (SEPP) 65 supported by the Residential Flat Design Code - Part 03 Building Design, 'Rules of Thumb' is relevant to the assessment of the daylight access into residential components of the proposed development. The above regulation states that:

- Living rooms and private open spaces for at least 70 % in a development should receive a minimum of three hours of direct sunlight between 9.00 am and 3.00 pm in mid winter. In dense urban areas a minimum of two hours may be acceptable.

Specific interest therefore lies in the solar access through the living areas windows and balconies of residential apartment of the proposed development during the winter solstice, June 21 between the hours of 9.00 am and 3.00 pm. Due to the low density population of mid to high rise buildings in Epping, the proposed development is required to comply with the minimum of three hours of direct sunlight to at least 70% of the living rooms and private open spaces in the development.

2.2 Solar Access Analysis

2.2.1 9.00 am – 3.00 pm on the Winter Solstice 21 June

Using the latest 3D AutoCAD drawings package, sun's eye view diagrams were generated for each 15 minute interval between 9.00 am and 3.00 pm on the Winter Solstice (21 June). Building 12 remained the same in AutoCAD but the influence of change in footprint has been incorporated in the solar access assessment. Sun's Eye View diagrams prepared for each 15 minute interval between 9.00 am and 3.00 pm on the Winter Solstice (21 June) are shown in **Appendix A**. Detailed hours of direct sunlight calculation to each unit are identified in **Appendix B**

Results of solar access to the living rooms and private open spaces of apartments of Stage 3 Epping Park development on June 21 (winter solstice) between the hours of 9.00 am and 3.00 pm inclusive are summarised in **Table 1**.

Table 1 Solar Access Summary for each Residential Building within the Stage 3 Development between 9.00am to 3.00pm on June 21

Building	Number of Apartments	Number of Apartments with at least 3hr of direct sunlight	Percentage of Apartments with at least 3hr of direct sunlight
11	47	34	72.34%
12	78	55	70.51%
13-14	71	51	71.83%
15-16	85	60	70.59%
17	41	29	70.73%
All	322	229	71.12%

The proposed development was found to provide **71.1 %** of the residential development with 3 hrs or more sunlight on the Winter Solstice, between the hours of 9.00 am to 3.00 pm at a 'sampling rate' of 15 minute intervals, complying with SEPP 65 Solar Access Rules.

3 CONCLUSION

SLR Consulting Pty Ltd (SLR) has been commissioned by Meriton Apartments Pty Ltd (Meriton) to prepare a Solar Access Study for the residential buildings 11 to 17 in Epping Park Stage 3 development.

The State Environmental Planning Policy (SEPP) 65 supported by the Residential Flat Design Code - Part 03 Building Design, 'Rules of Thumb' is relevant to the assessment of the daylight access into residential components of the proposed development. The above regulation states that:

- Living rooms and private open spaces for at least 70 % in a development should receive a minimum of three hours of direct sunlight between 9.00 am and 3.00 pm in mid winter. In dense urban areas a minimum of two hours may be acceptable.

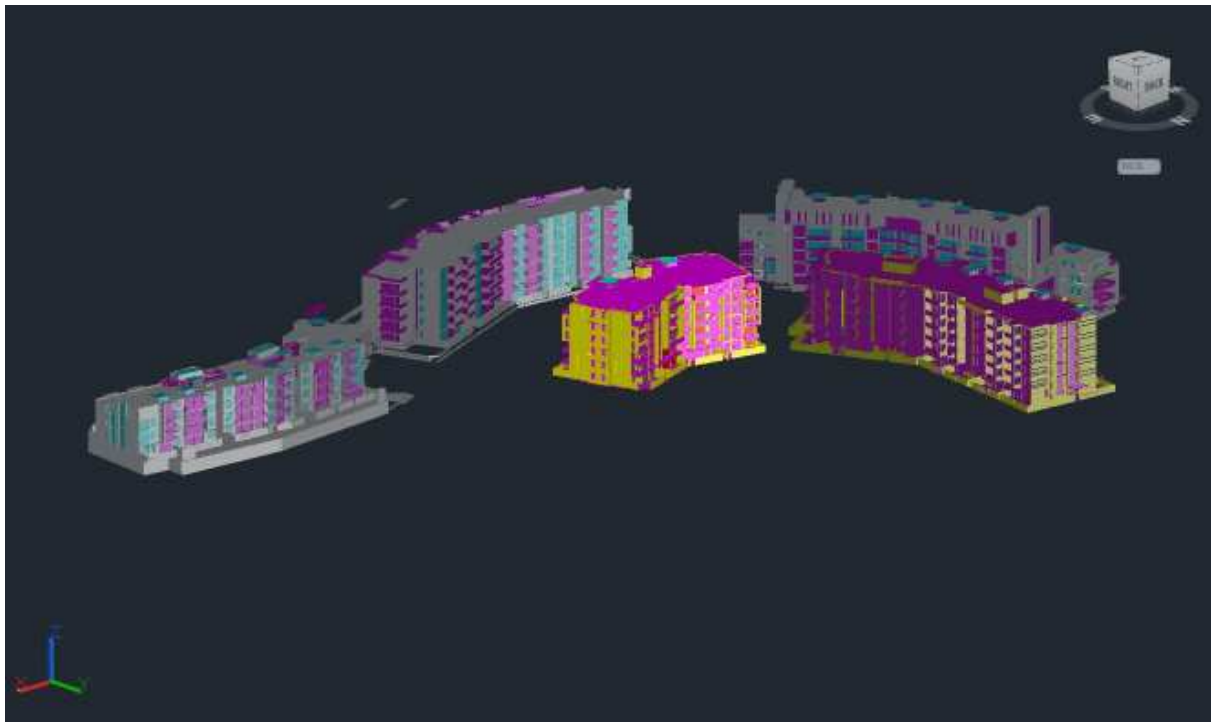
Specific interest therefore lies in the solar access through the living areas windows and balconies of residential apartment of the proposed development during the winter solstice, June 21 between the hours of 9.00 am and 3.00 pm. Due to the low density population of mid to high rise buildings in Epping, the proposed development is required to comply with the minimum of three hours of direct sunlight to at least 70% of the living rooms and private open spaces in the development.

Using the latest 3D AutoCAD drawings package, sun's eye view diagrams were generated for each 15 minute interval between 9.00 am and 3.00 pm on the Winter Solstice (21 June)

On the basis of the current Solar Access Analysis of the development, SLR has concluded the following:

- The proposed development was found to provide **71.1 %** of the residential development with 3 hrs or more sunlight on the Winter Solstice, between the hours of 9.00 am to 3.00 pm at a 'sampling rate' of 15 minute intervals.

June 21 9.00am



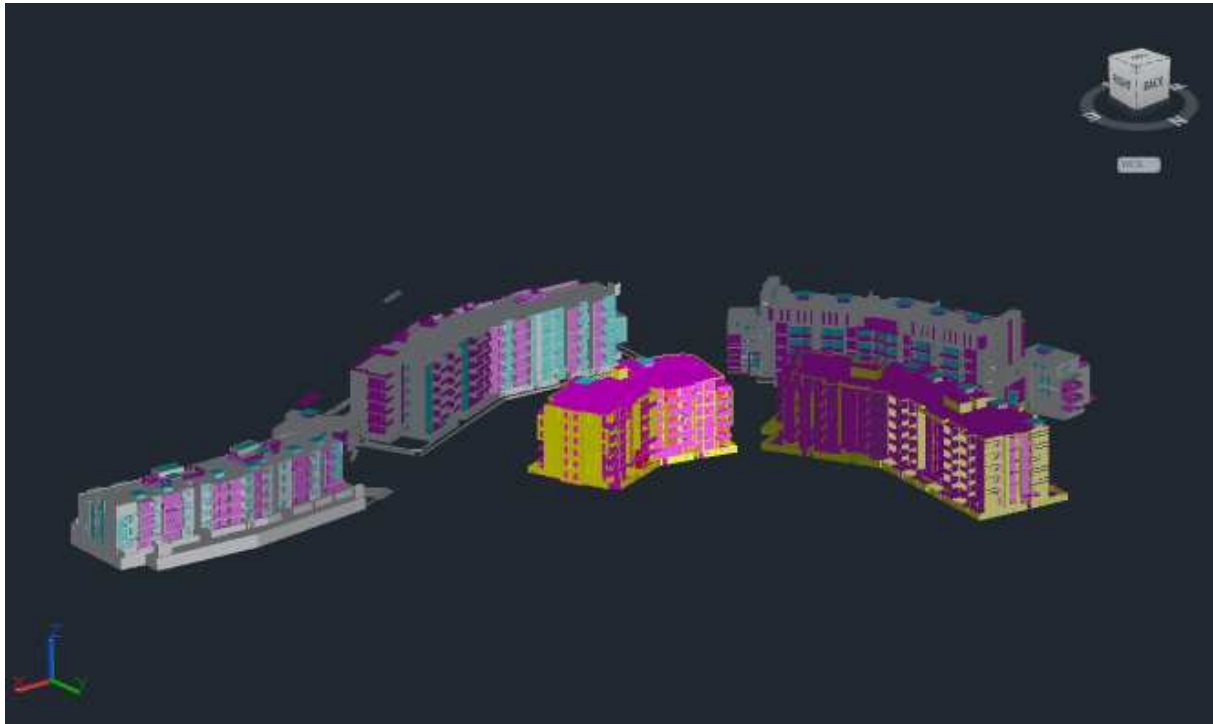
Appendix A

Report Number 610.11592-R2

Page 10 of 14

JUNE 21 SUN EYE VIEWS

June 21 9.15am



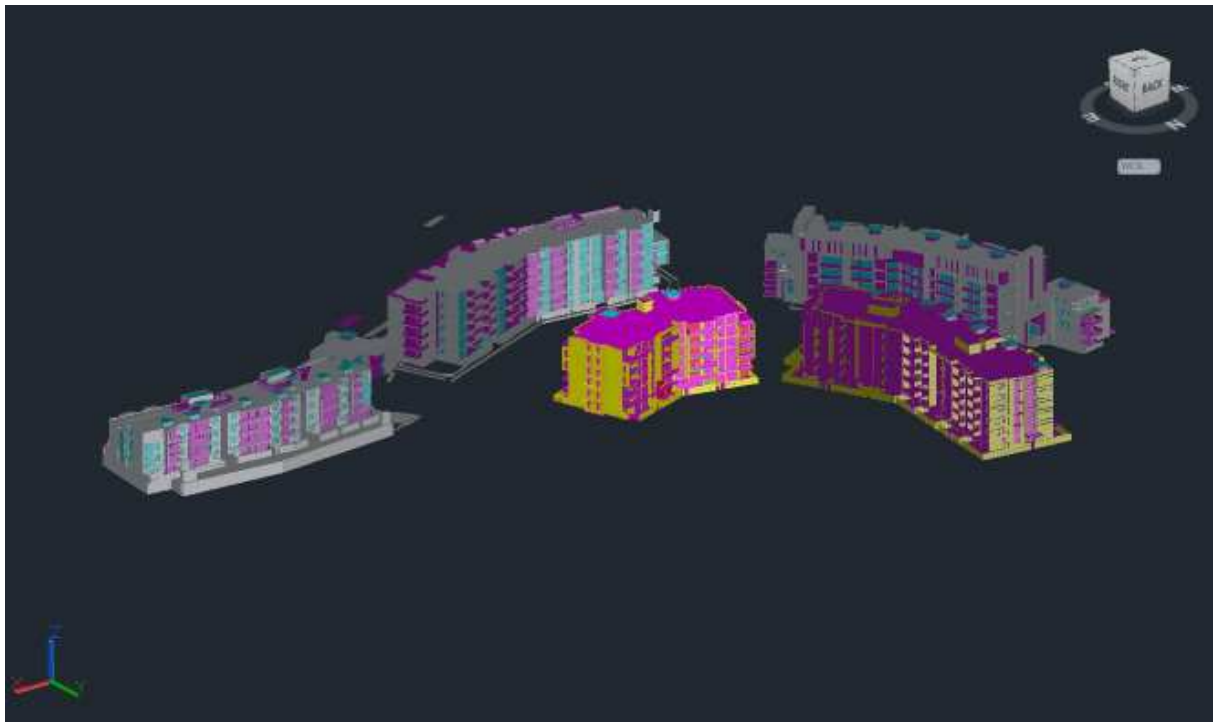
Appendix A

Report Number 610.11592-R2

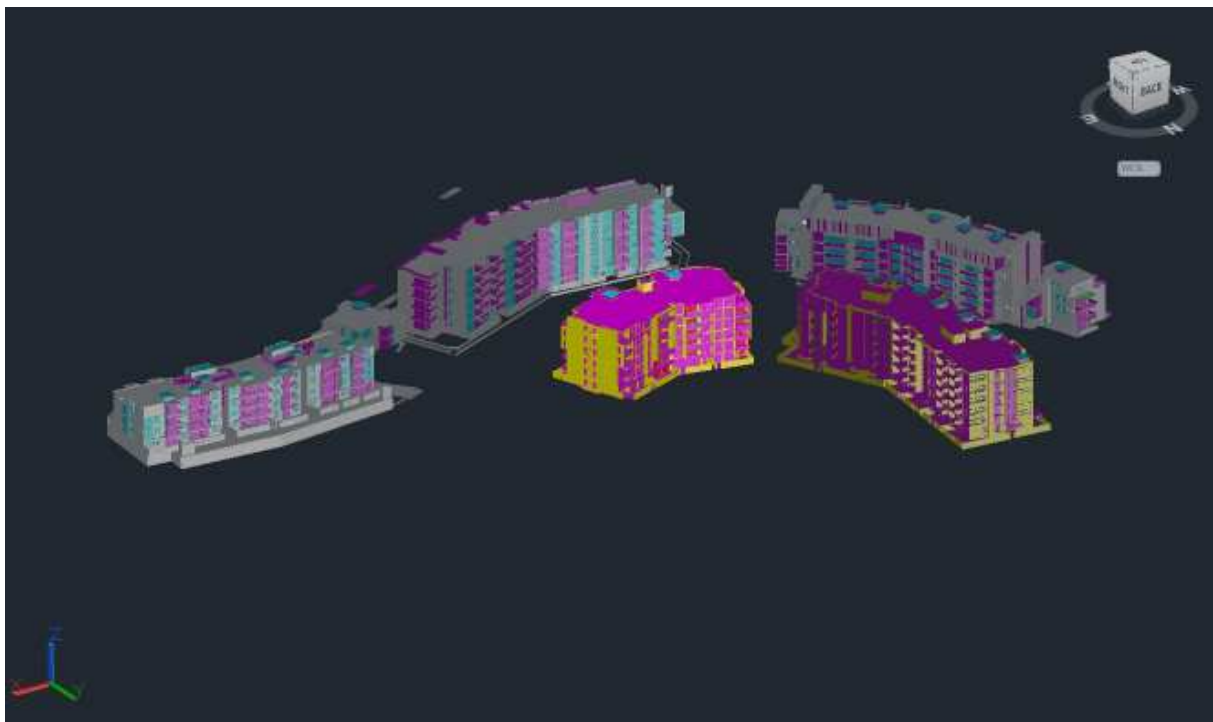
Page 11 of 14

JUNE 21 SUN EYE VIEWS

June 21 9.30am



June 21 9.45am



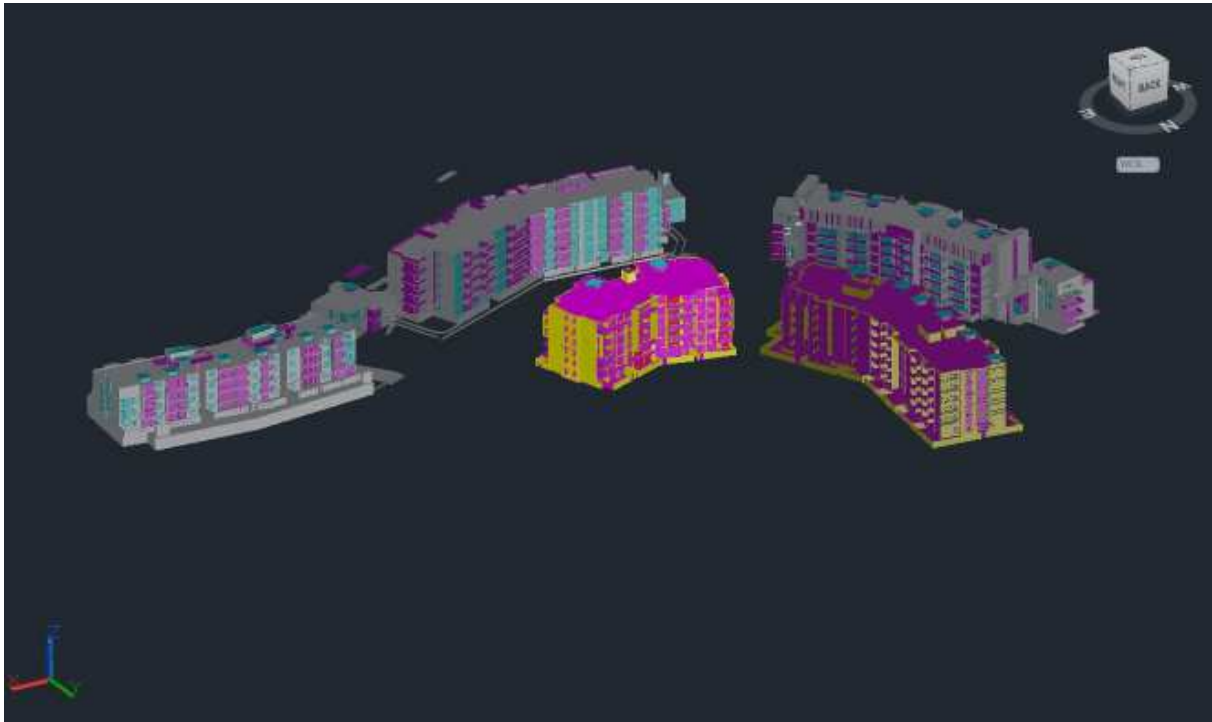
Appendix A

Report Number 610.11592-R2

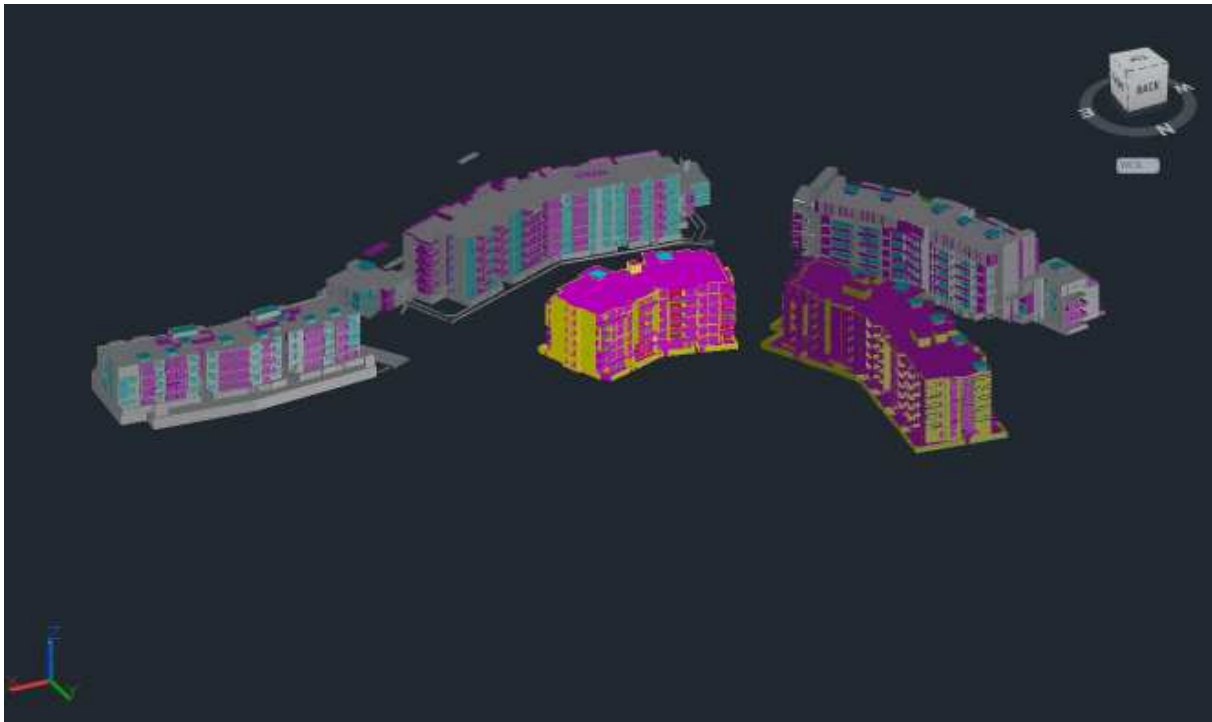
Page 12 of 14

JUNE 21 SUN EYE VIEWS

June 21 10.00am



June 21 10.15am



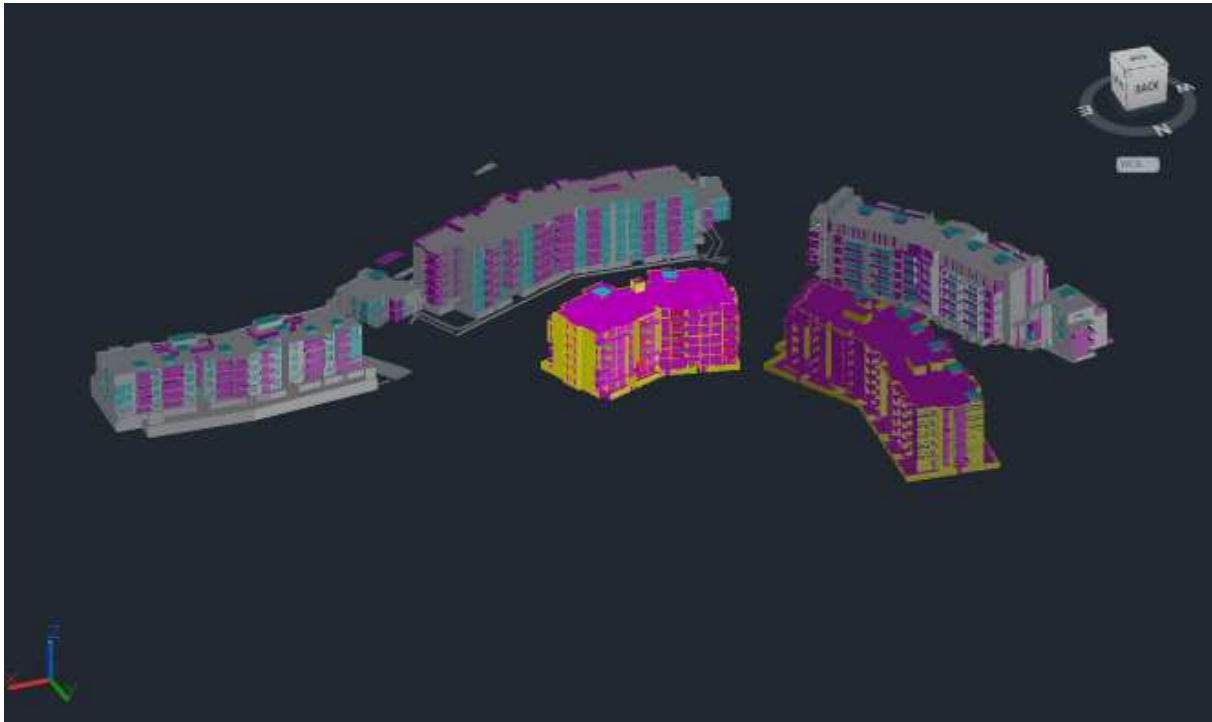
Appendix A

Report Number 610.11592-R2

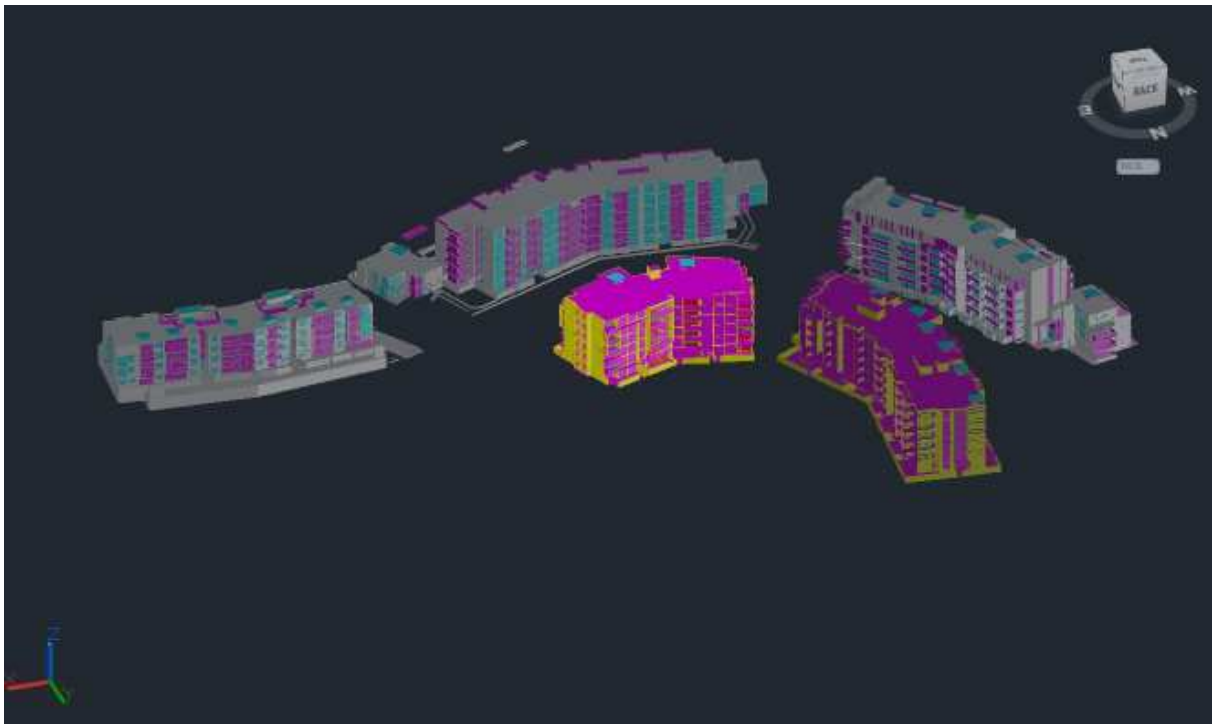
Page 13 of 14

JUNE 21 SUN EYE VIEWS

June 21 10.30am



June 21 10.45am



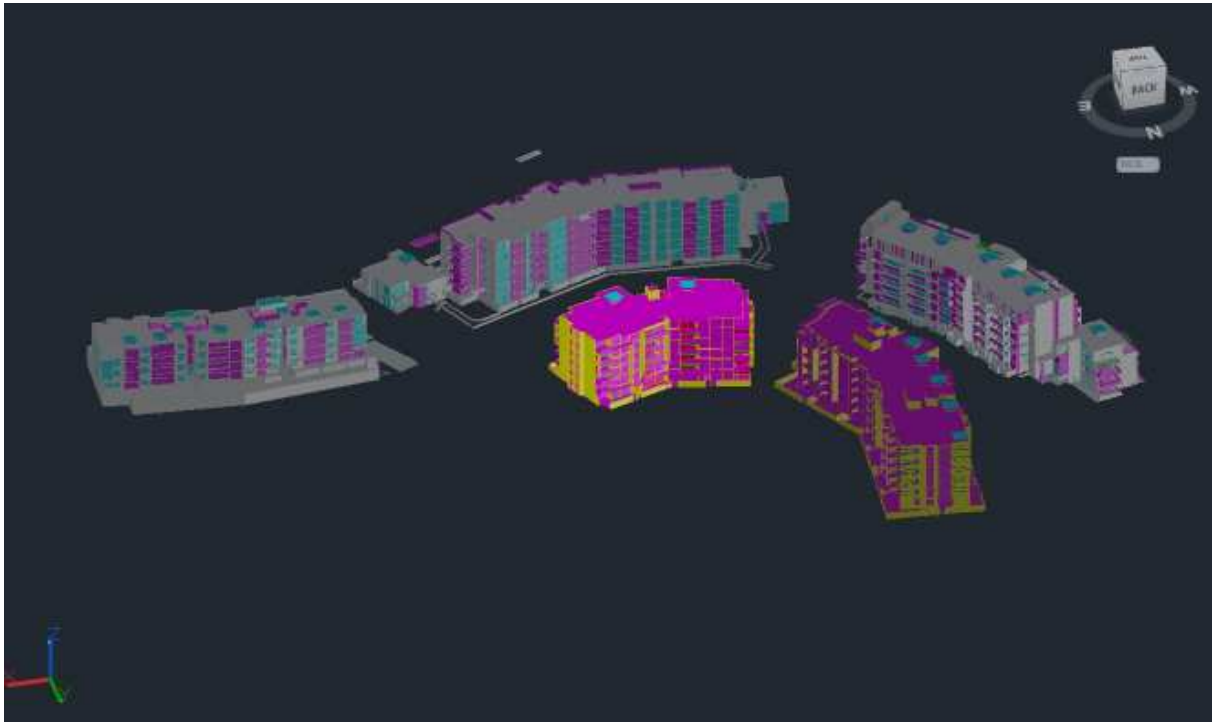
Appendix A

Report Number 610.11592-R2

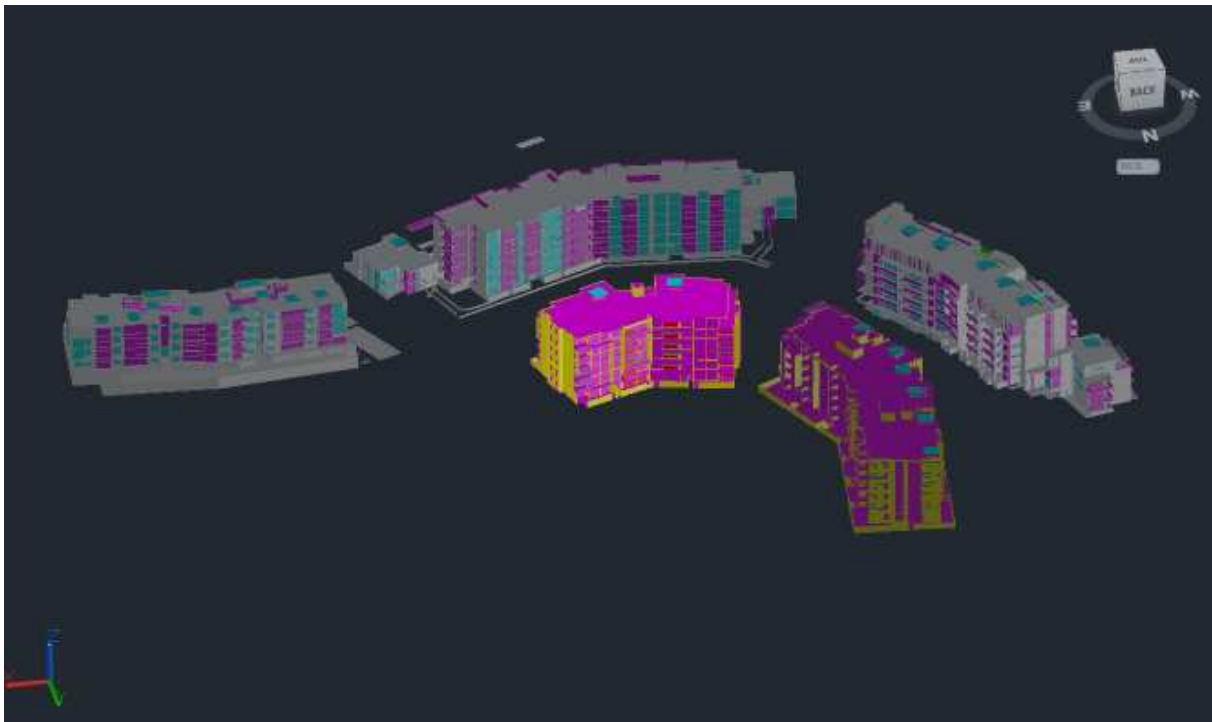
Page 14 of 14

JUNE 21 SUN EYE VIEWS

June 21 11.00am



June 21 11.15am



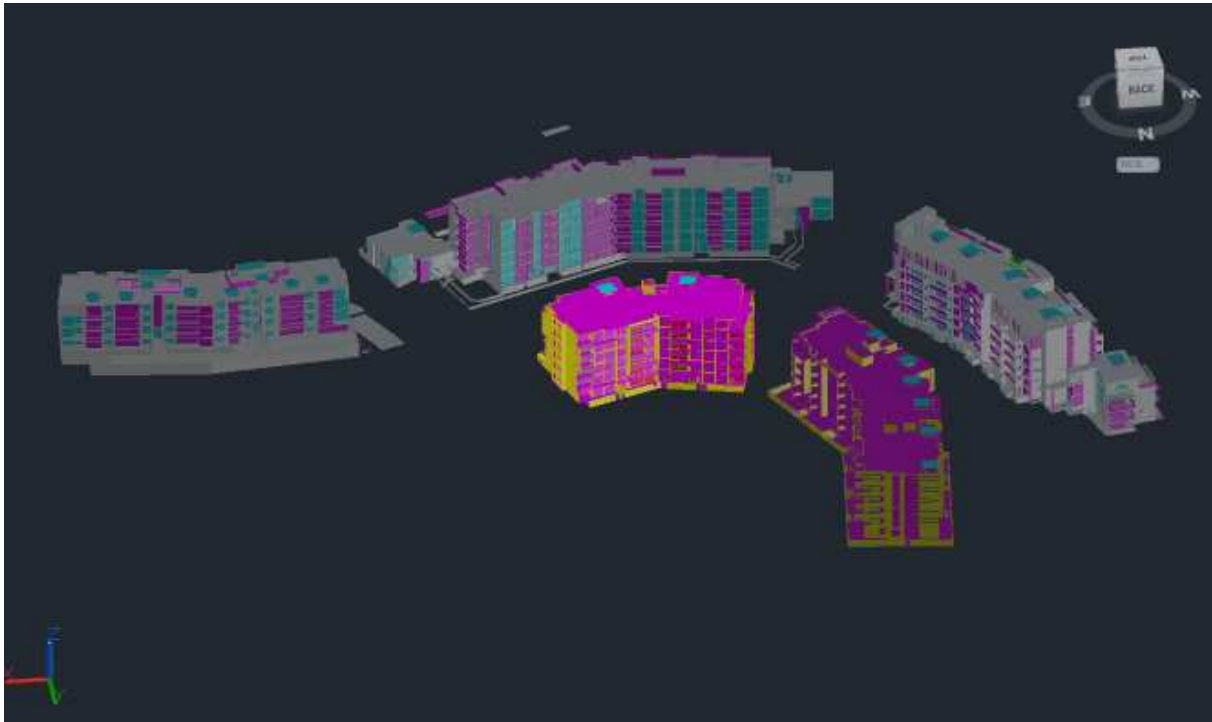
Appendix A

Report Number 610.11592-R2

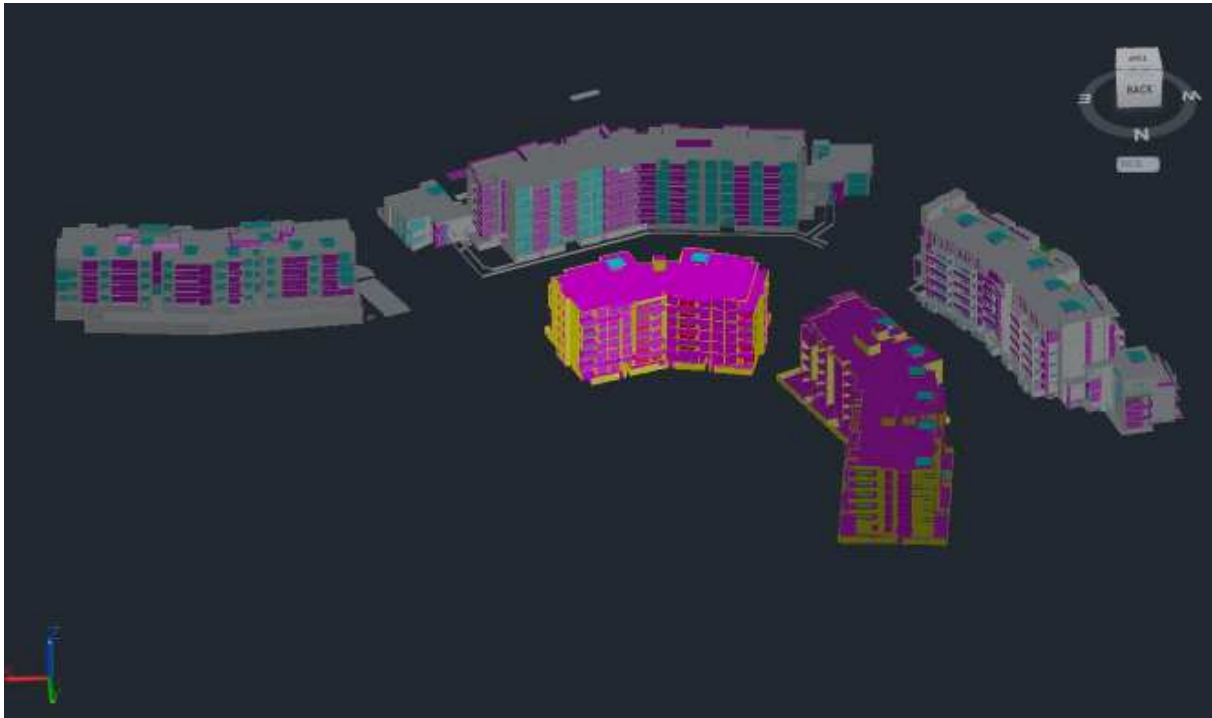
Page 15 of 14

JUNE 21 SUN EYE VIEWS

June 21 11.30am



June 21 11.45am



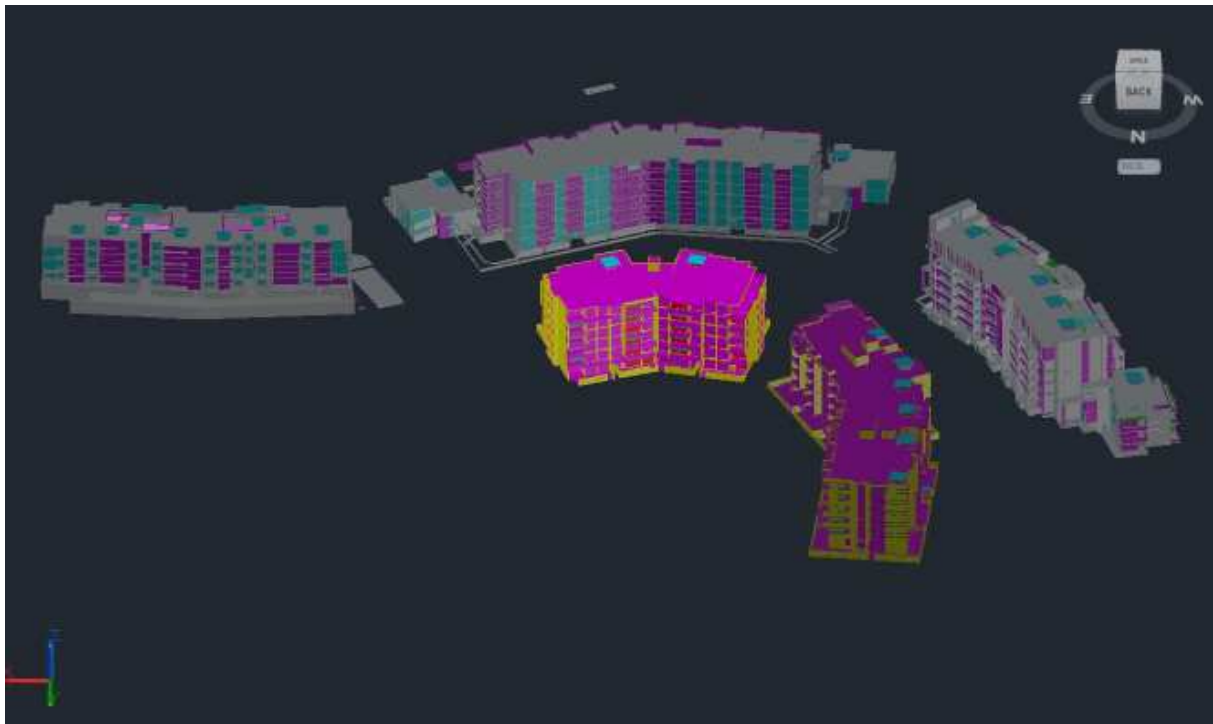
Appendix A

Report Number 610.11592-R2

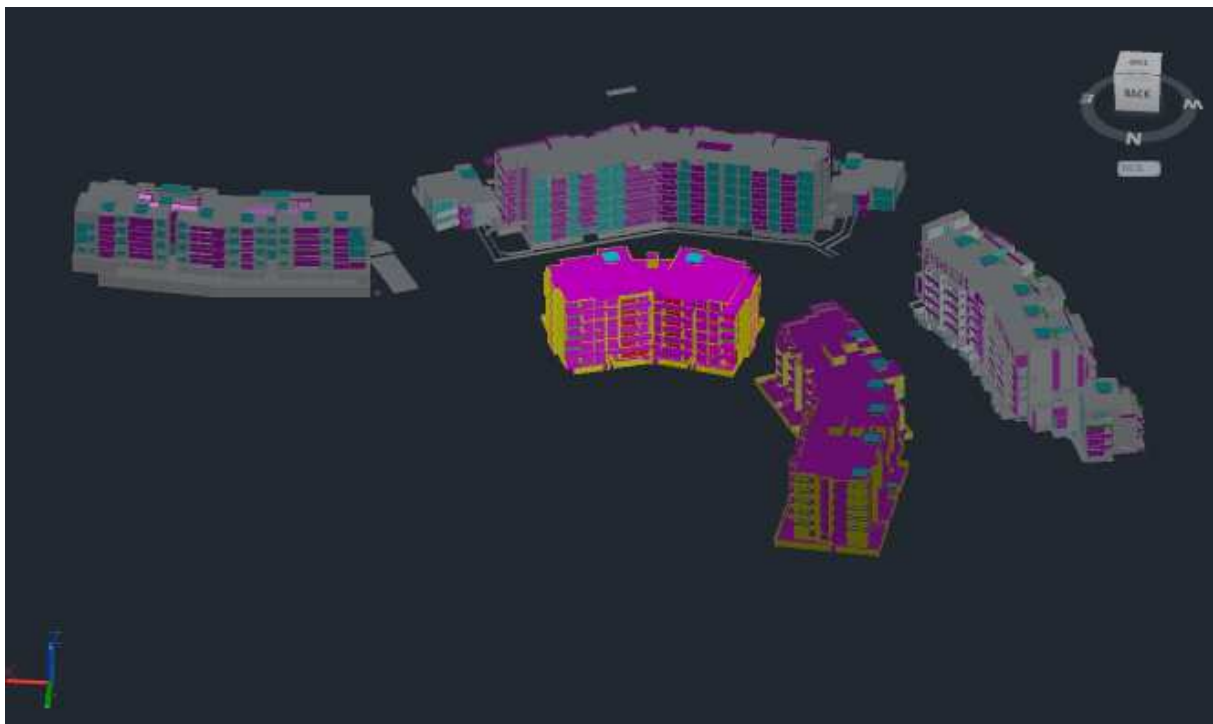
Page 16 of 14

JUNE 21 SUN EYE VIEWS

June 21 12.00pm



June 21 12.15pm



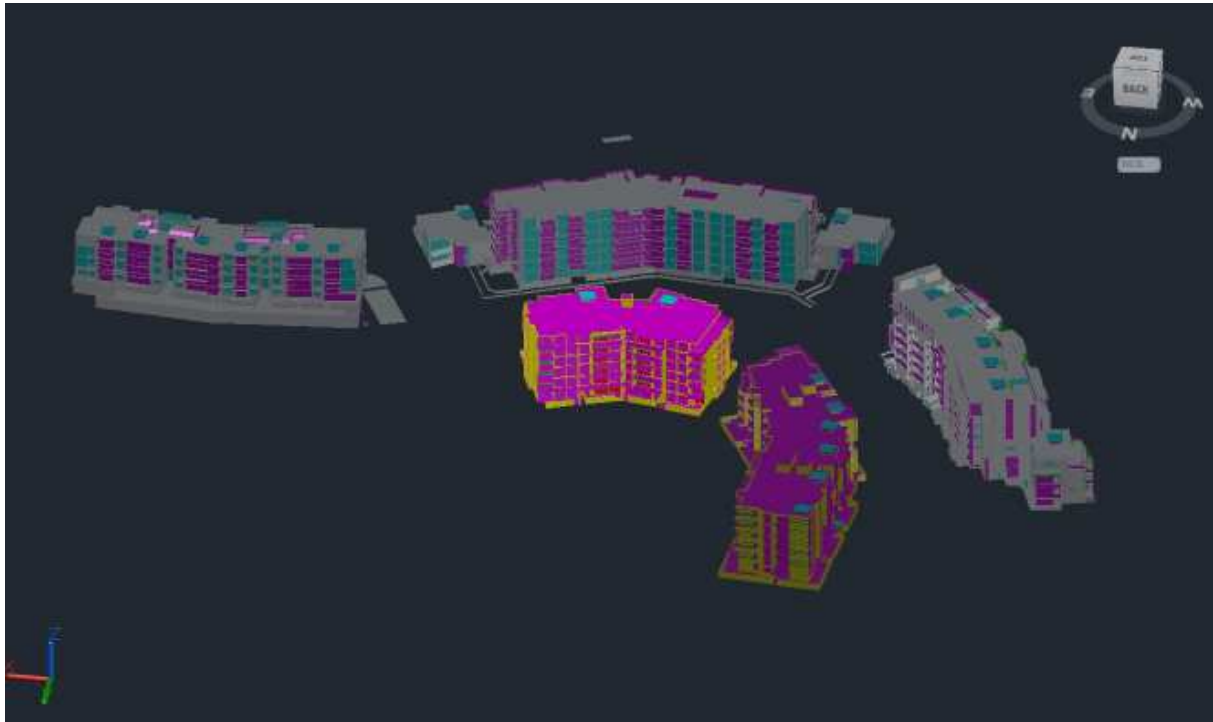
Appendix A

Report Number 610.11592-R2

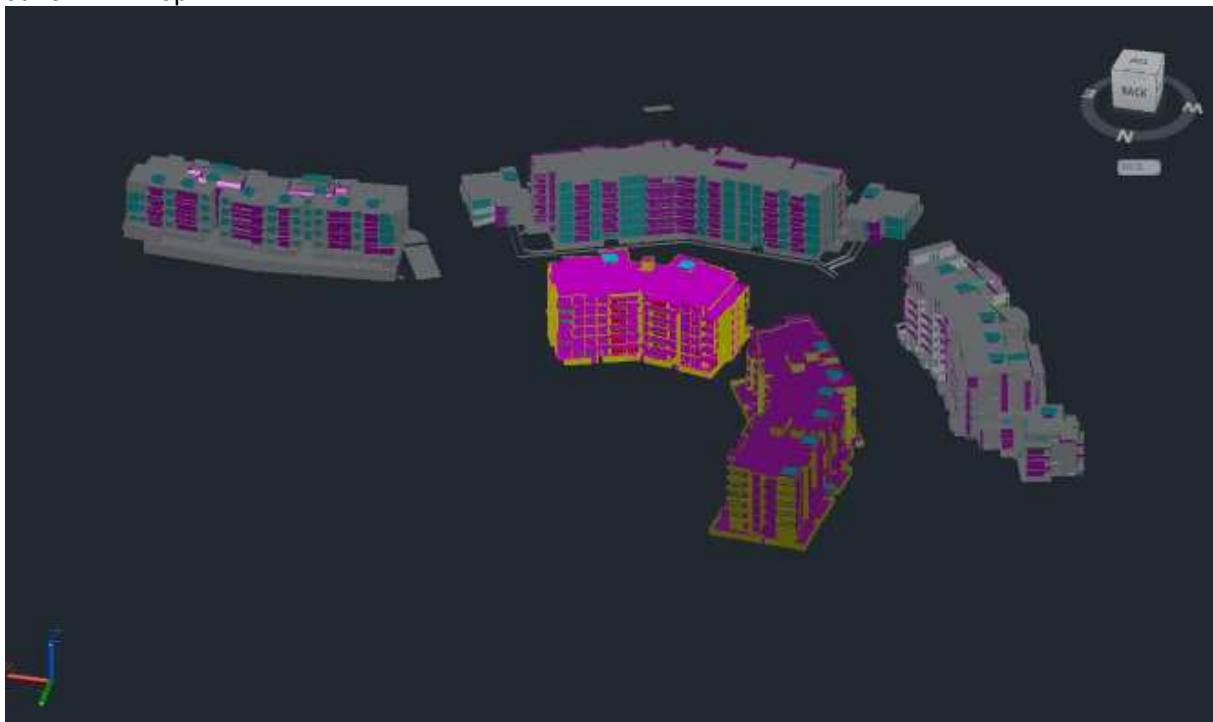
Page 17 of 14

JUNE 21 SUN EYE VIEWS

June 21 12.30pm



June 21 12.45pm



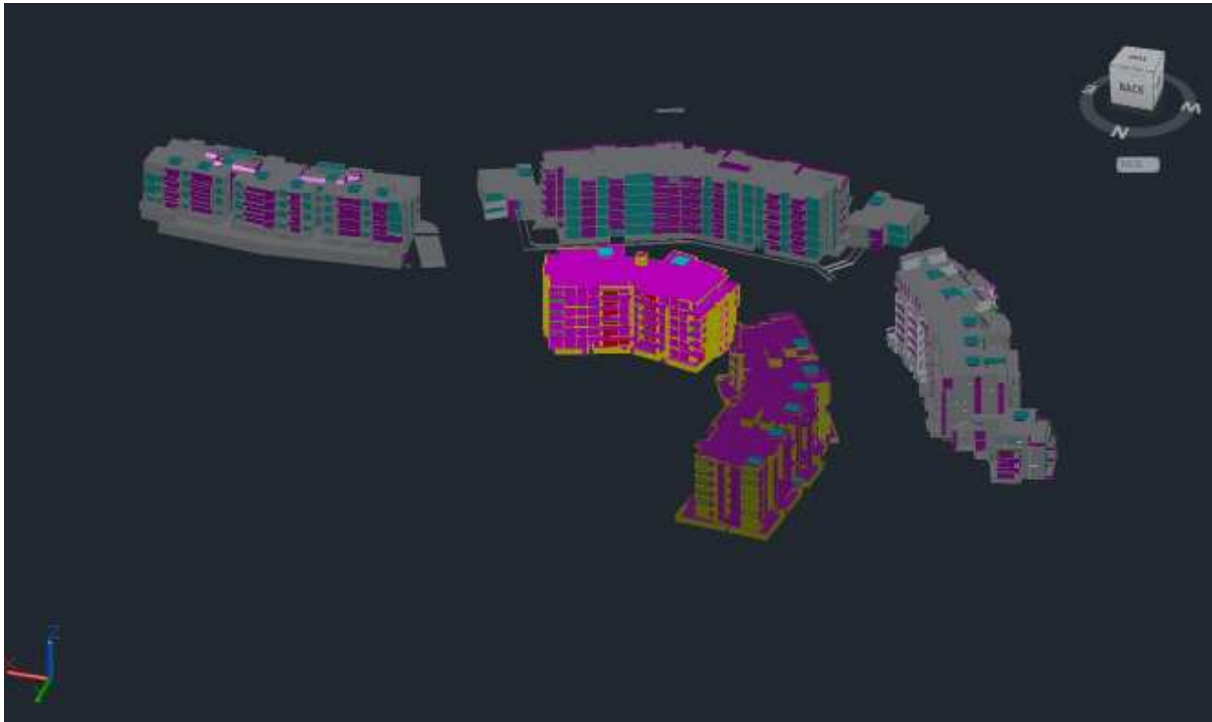
Appendix A

Report Number 610.11592-R2

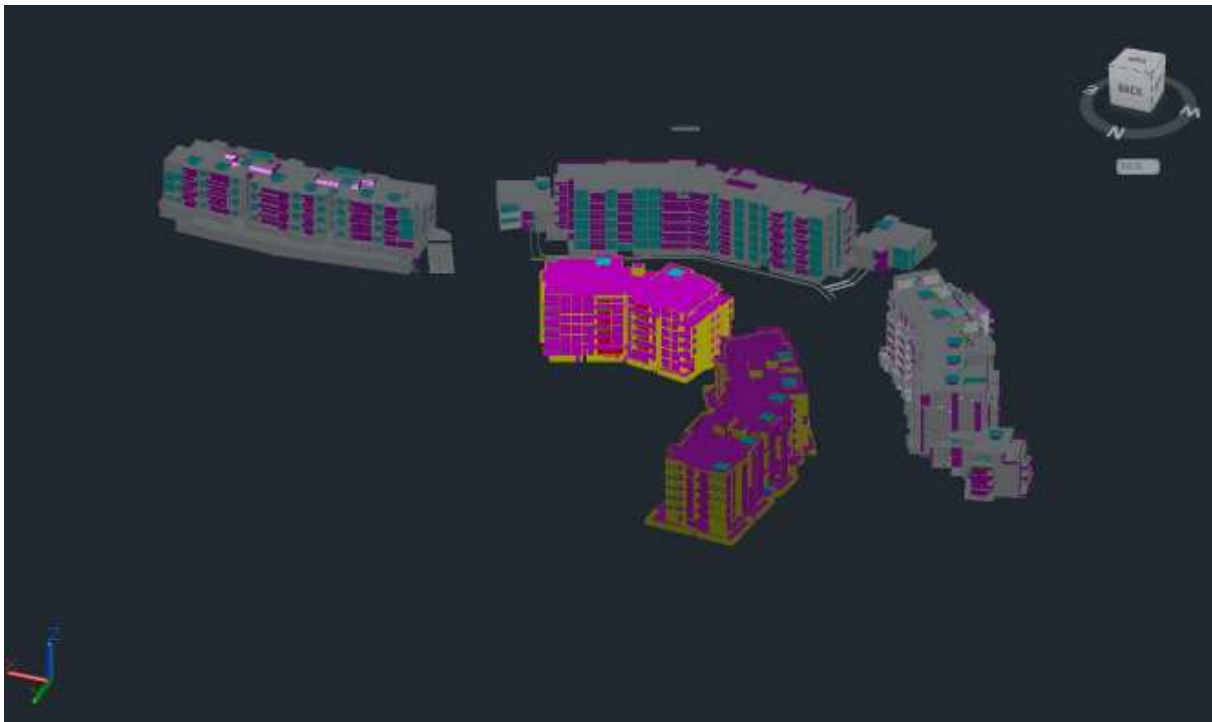
Page 18 of 14

JUNE 21 SUN EYE VIEWS

June 21 1.00 pm



June 21 1.15 pm



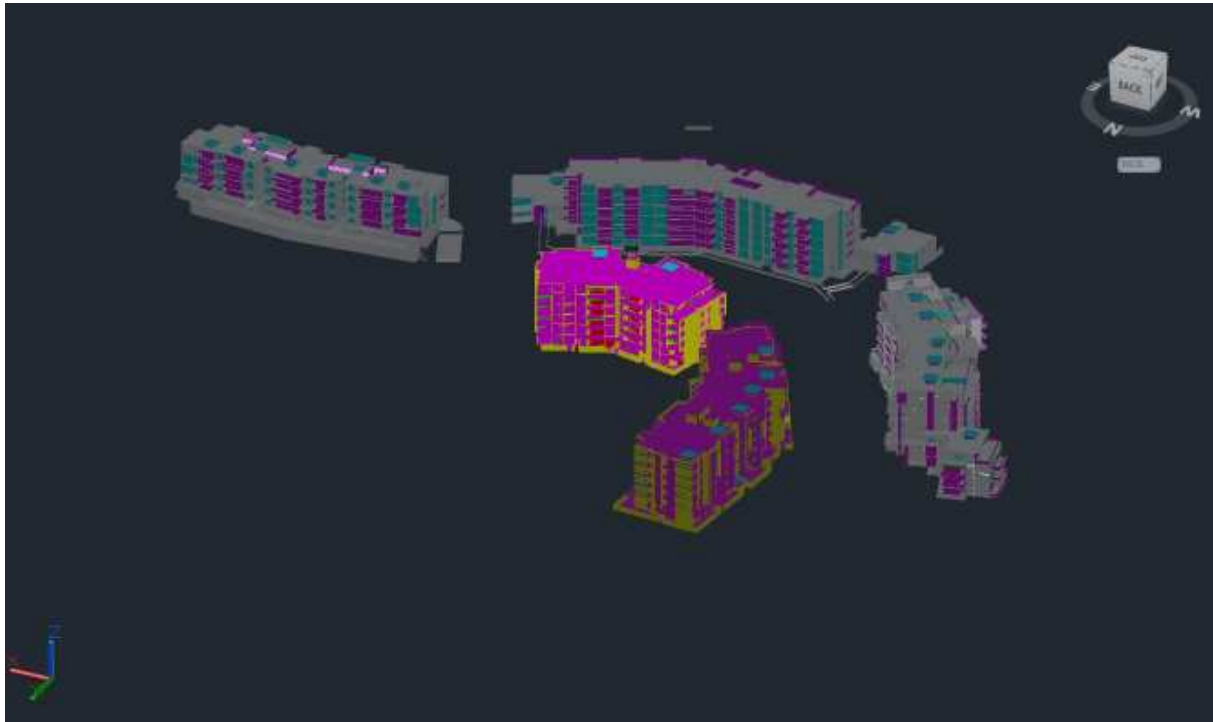
Appendix A

Report Number 610.11592-R2

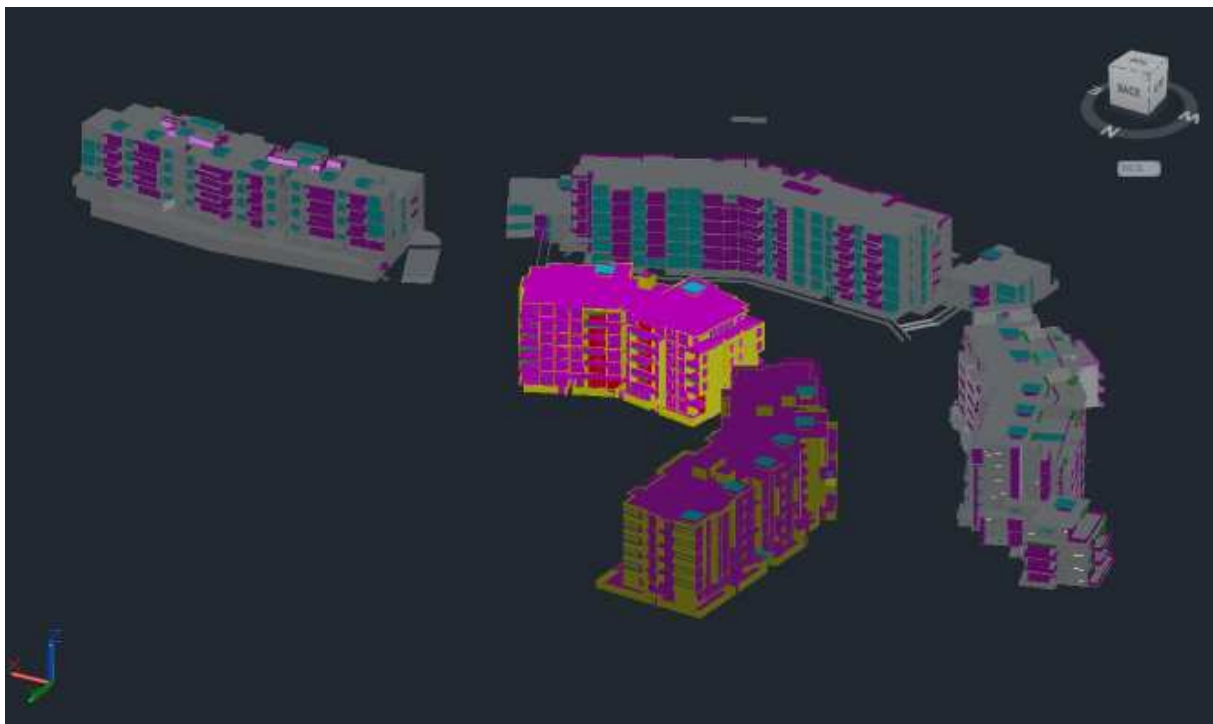
Page 19 of 14

JUNE 21 SUN EYE VIEWS

June 21 1.30 pm



June 21 1.45 pm



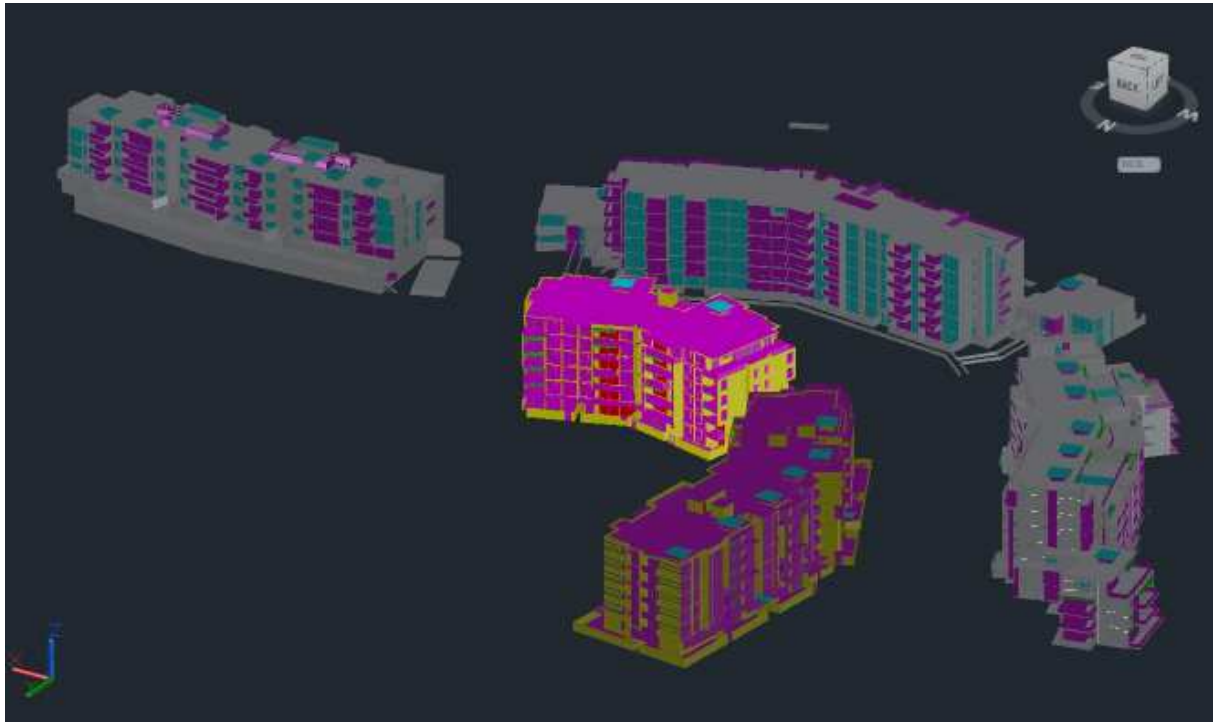
Appendix A

Report Number 610.11592-R2

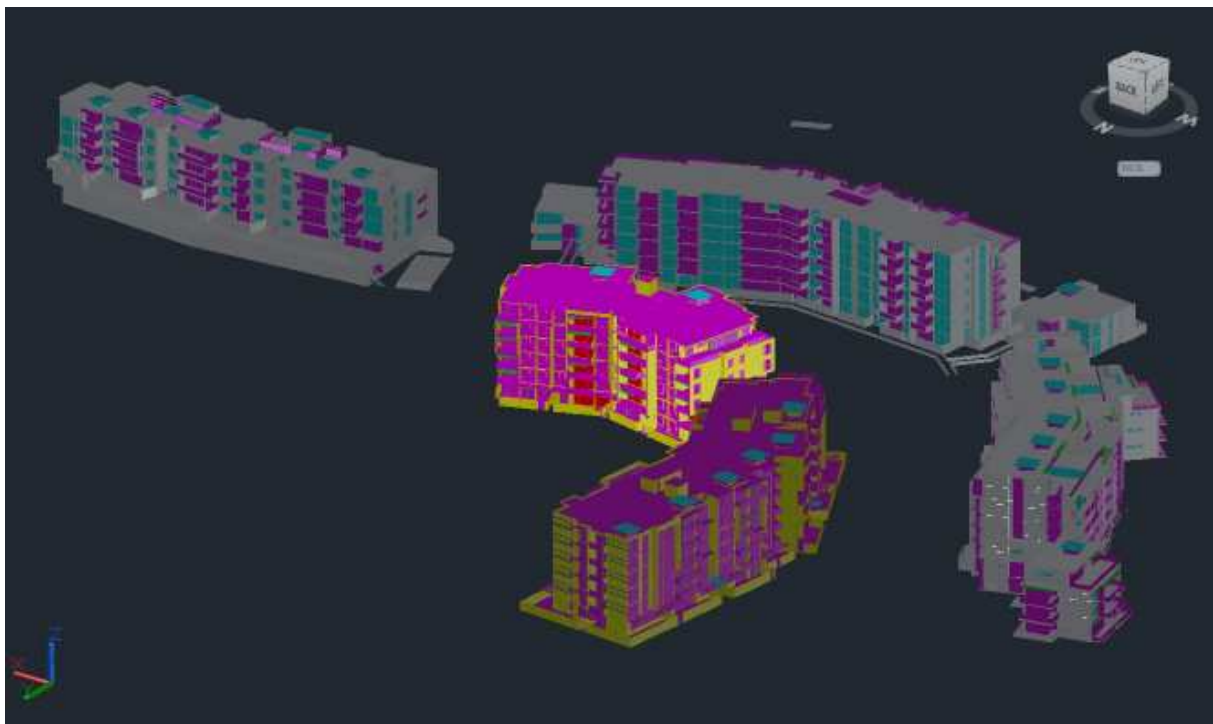
Page 20 of 14

JUNE 21 SUN EYE VIEWS

June 21 2.00 pm



June 21 2.15 pm



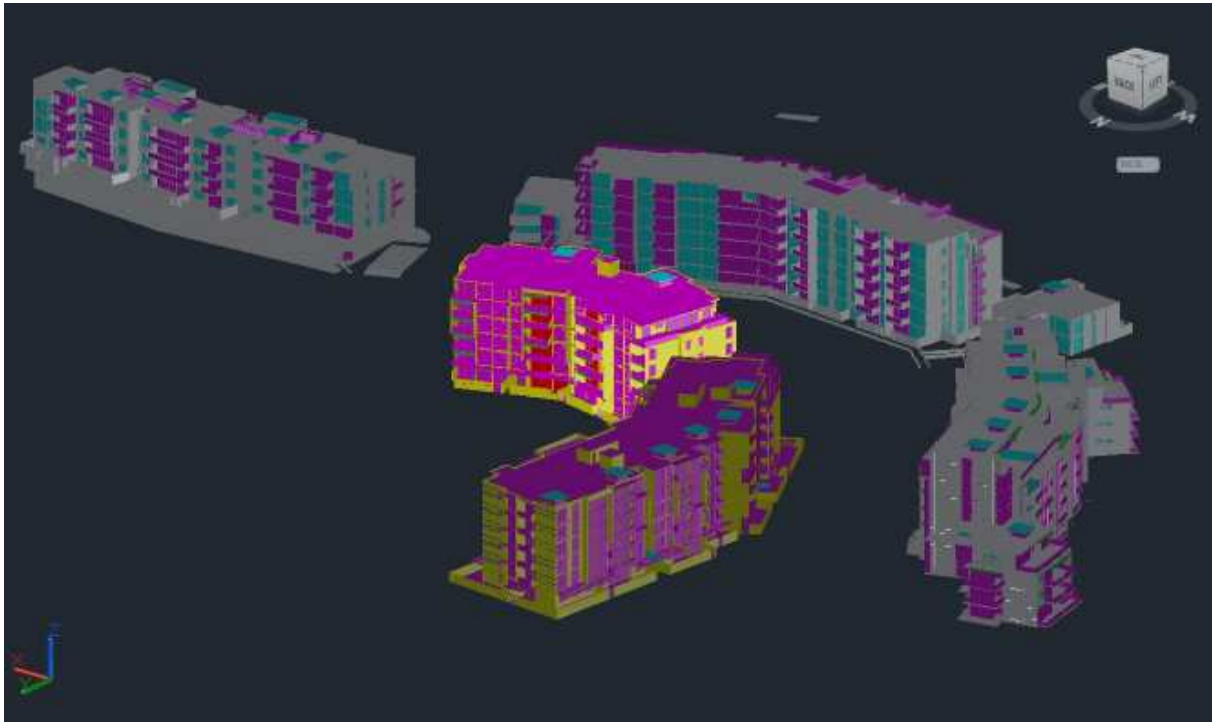
Appendix A

Report Number 610.11592-R2

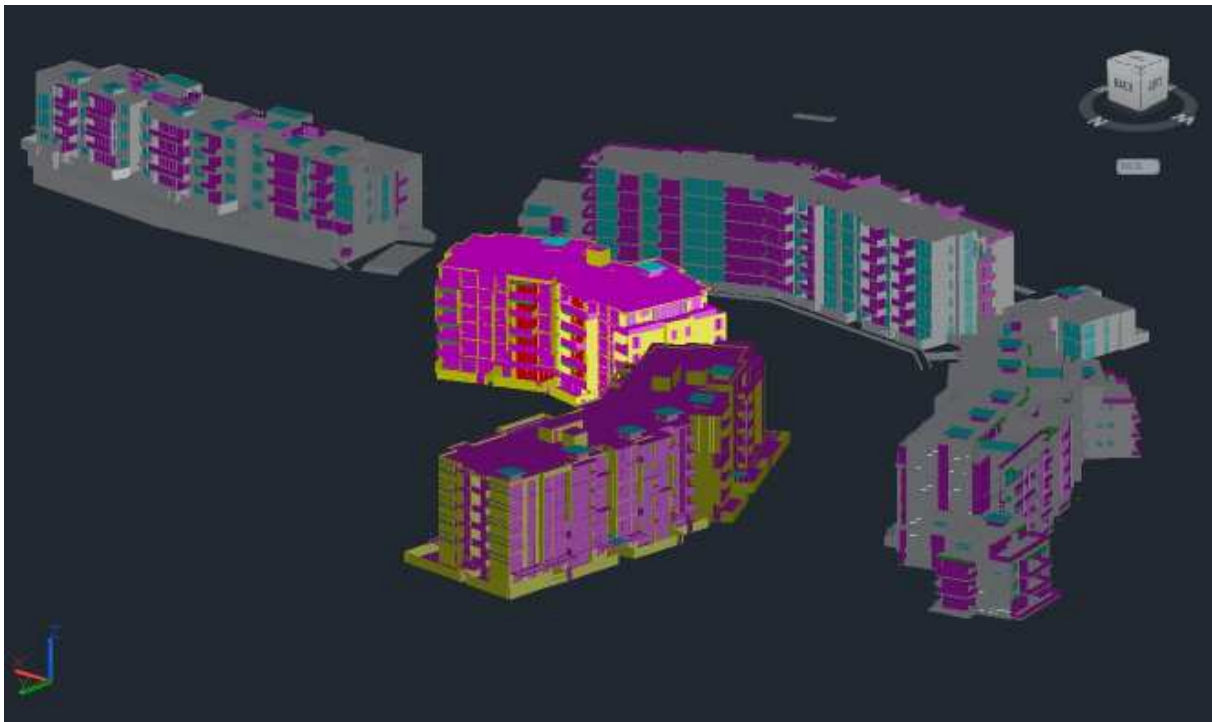
Page 21 of 14

JUNE 21 SUN EYE VIEWS

June 21 2.30 pm



June 21 2.45 pm



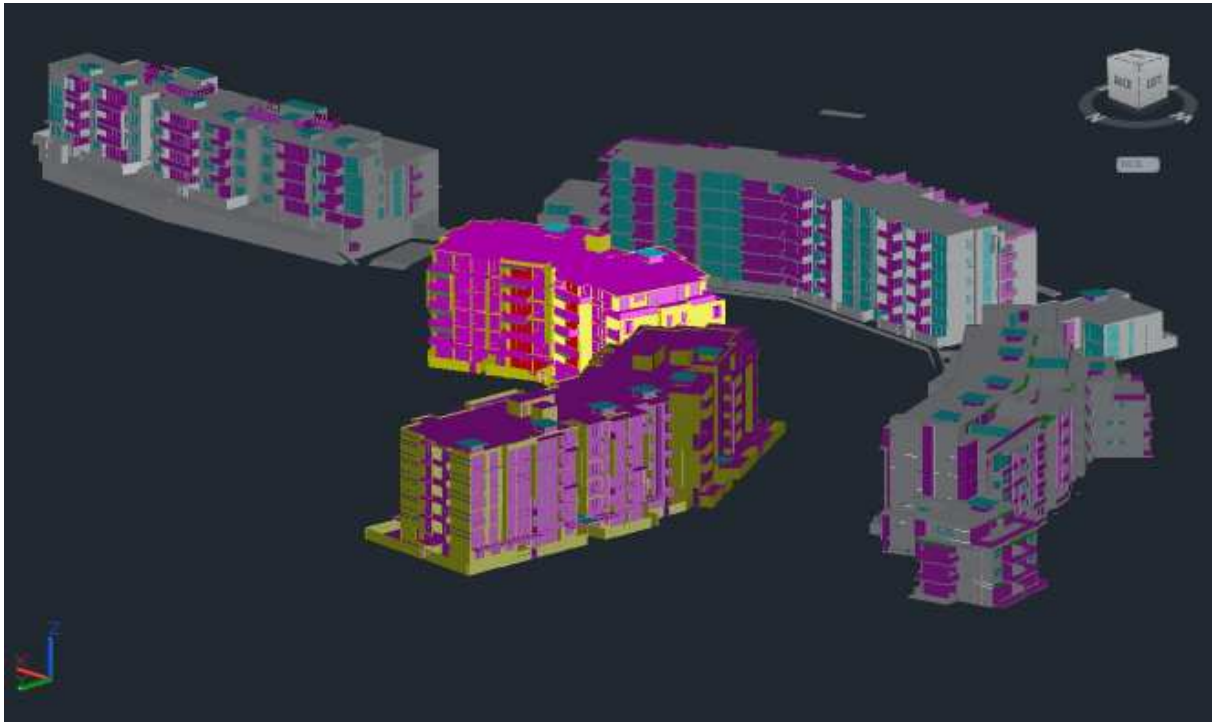
Appendix A

Report Number 610.11592-R2

Page 22 of 14

JUNE 21 SUN EYE VIEWS

June 21 3.00 pm



DETAILED SUN ACCESS CALCULATION FOR EACH APARTMENT FROM 9.00 AM TO 3.00 PM ON JUNE 21

\\SOPHE-WONG\Projects\10-SrvSYD\10-Sydney\10-9067 200 - 220 Pacific Highway, Crows Nest\Heggies Data\Calculations\solar access June21 2010\1001_residentia only.xls
Sheet1 Printed 25-03-2013 1:42 PM

Block	Level	unit	9:00	9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	Total hr of sunlight betw 9am- 3pm	3hr sunlight betw 9.00- 15.00	Total no of apts with 3 hr sun access per block	Total number of apt per block	% of apt with 3hrs sun access
		UG23		0.25	0.25	0.25	0.25	0.25															0.25	0.25	0.25	0.25	0.25	2.5	0			
		UG24																					0.25	0.25	0.25	0.25	0.25	1.25	0			
	Level1	U111												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.5	1			
		U112		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25													3	1			
		U113		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25													2.25	0			
		U114		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25															2.25	0			
		U115		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	0			
		U116													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U118													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U119													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U120		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U121		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25										3.75	1			
		U122		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25										3.75	1			
		U123		0.25	0.25	0.25																						0.75	0			
		U124																						0.25	0.25	0.25	0.25	1	0			
	Level2	U211												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.5	1			
		U212		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25													3	1			
		U213		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25										2.25	0			
		U214		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25															2.25	0			
		U215		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	0			
		U216													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U218													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U219													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U220		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U221		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25										3.75	1			
		U222		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25										3.75	1			
		U223		0.25	0.25	0.25																						0.75	0			
		U224																						0.25	0.25	0.25	0.25	1	0			
	Level3	U311												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.5	1			
		U312		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25												3	1			
		U313		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25															2.25	0			
		U314		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	0			
		U315		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	0			
		U316													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U318													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U319													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U320		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25													3	1			
		U321		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.75	1			
		U322		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25											3.75	1			
		U323		0.25	0.25	0.25																						0.75	0			
		U324																						0.25	0.25	0.25	0.25	1	0			
	Level 4	U411												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.5	1			
		U412		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25													3	1			
		U413		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	0			
		U414		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25													3	1			
		U415		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	0			
		U416													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U418													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U419													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1			
		U420		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25												3	1			
		U421		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.75	1			
		U422		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25										3.75	1			
		U423		0.25	0.25	0.25																						0.75	0			
		U424																						0.25	0.25	0.25	0.25	1	0			
	Level 5	U510			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	5.75	1			
		U511		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1			
		U512		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25													3	1			
		U513		0.25	0.																											

\\SOPHE-WONG\Projects\10-SrvSYD\10-Sydney\10-9067 200 - 220 Pacific Highway, Crows Nest\Heggies Data\Calculations\solar access June21 2010\1001_residentia only.xls
Sheet1 Printed 25-03-2013 1:42 PM

Block	Level	unit	9:00	9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	Total hr of sunlight betw 9am-3pm	3hr sunlight betw 9.00-15.00	Total no of apts with 3 hr sun access per block	Total number of apt per block	% of apt with 3hrs sun access	
		U333		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		U440																									0.25	0.25	0				
		U441																									0.25	0.25	0				
		U442		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25						4.5	1				
		U443		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		4.5	1				
		U444		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		4.5	1				
	Level 4	U429		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		4	1				
		U430		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		4	1				
		U431		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.5	1				
		U432					0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	5.25	1			
		U433					0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	5.25	1			
		U440					0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		4.5	1				
		U441					0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		4.5	1				
		U442		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		4.5	1				
		U443		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		4.5	1				
		U444		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		4.5	1				
	Level 5	U528		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		U529		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		U530		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		U531		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		U540		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		U541		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
																												0	0				
15-16	LG	UG62		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	5.75	1				
		UG63																										0	0				
		UG48					0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		4.75	1				
		UG49																										0	0				
	GROUND	UG51																		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2	0				
		UG52																	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2.25	0				
		UG54																		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0	0				
		UG55													0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1				
		UG56		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		UG57		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		UG58		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		UG59		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		UG60																										0	0				
		UG68																										0	0				
		UG69																										0	0				
		UG70		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.5	1				
		UG71		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		UG72		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		UG73																										0	0				
		UG65		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25													3	1				
		UG66																					0.25	0.25	0.25	0.25	0.25	1.5	0				
	Level 1	U154																										0	0				
		U155														0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1				
		U156		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		U157		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		U158		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		U159		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1				
		U160																										0	0				
		U168																															
		U169																										0	0				
		U170		0.25	0.25																												

ISOPHE WONG\Projects\10-SrvSYD\10-sydney\10-9067 200 - 220 Pacific Highway, Crow's Nest\Heggies Data\Calculations\solar access June21 2010\1001_residentia only.xls
Sheet1 Printed 25-03-2013 1:42 PM

322