



global environmental solutions

Solar Access Analysis

500-520 Pacific Hwy, St Leonards

Report Number 610.15946-R02

5 October 2017

Urban Develop
Level 12, 220 George Street
Sydney NSW 2000

Version: v2.0

Solar Access Analysis

500-520 Pacific Hwy, St Leonards

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)
+61 2 9427 8100 +61 2 9427 8200
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 timescale and resources allocated 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 Urban Develop.
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.

SLR 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
610.15946-R02	v2.0	5 October 2017	James Cleary	Neihad Al-Khalidy	Neihad Al-Khalidy
610.15946-R02	v1.4	18 August 2017	James Cleary	Neihad Al-Khalidy	Neihad Al-Khalidy
610.15946-R02	v1.3	10 August 2016	Horatio Cai & Peter Hayman	Neihad Al-Khalidy	Neihad Al-Khalidy
610.15946	Revision 1	04 April 2016	Horatio Cai	Neihad Al-Khalidy	Neihad Al-Khalidy

Executive Summary

SLR has been engaged by NHVIMG Pty Ltd to conduct a detailed solar access analysis of the proposed development at 500-520 Pacific Hwy, St Leonards.

The Apartment Design Guide is relevant to the assessment of the daylight access into residential components of the developments in question. The above regulation states that:

- Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.
- In all other areas, living rooms and private open spaces of at least 70% of the apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter.
- A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.

From the model provided, SLR has calculated that 2 hours of direct sunlight will reach approximately 64.34% of the apartments and the percentage of apartments without direct sunlight is 24%.

Table of Contents

1	INTRODUCTION	5
1.1	Development Site	5
1.2	Proposed Development Description	5
2	SOLAR ACCESS ANALYSIS	7
3	SOLAR ACCESS TO RESIDENTIAL BUILDINGS	8
3.1	Daylighting Considerations	8
3.2	9.00 am – 3.00 pm on the Winter Solstice 21 st June	8
4	CONCLUSIONS	9

TABLES

Table 1	Solar Access Summary using 2 hour criterion between 9.00am to 3.00pm on June 21 st	8
Table 2	Solar Access Summary using “no direct sunlight” criterion between 9.00am to 3.00pm on June 21 st	8

FIGURES

Figure 1	Site Location	5
Figure 2	Elevation View	6
Figure 3	3D Modelling in AutoCAD, viewed from the northeast.	7

APPENDICES

Appendix A	Sun Eye Views
Appendix B	Detailed Solar Access Calculations

1 INTRODUCTION

SLR Consulting Australia (SLR) has been engaged by NHVIMG Pty Ltd to conduct a detailed solar access analysis of the proposed development at 500-520 Pacific Hwy, St Leonards.

1.1 Development Site

The site is located just to the south east of St Leonards Train Station near the corner of Albany Street and the Pacific Highway. There is currently a medium rise building on the site. The immediate surroundings contain a mixture of medium rise and lower level buildings to the south and a number of high-rise buildings to the north from the east round to the west.

Figure 1 Site Location



Image: Nearmap, 22 August 2017

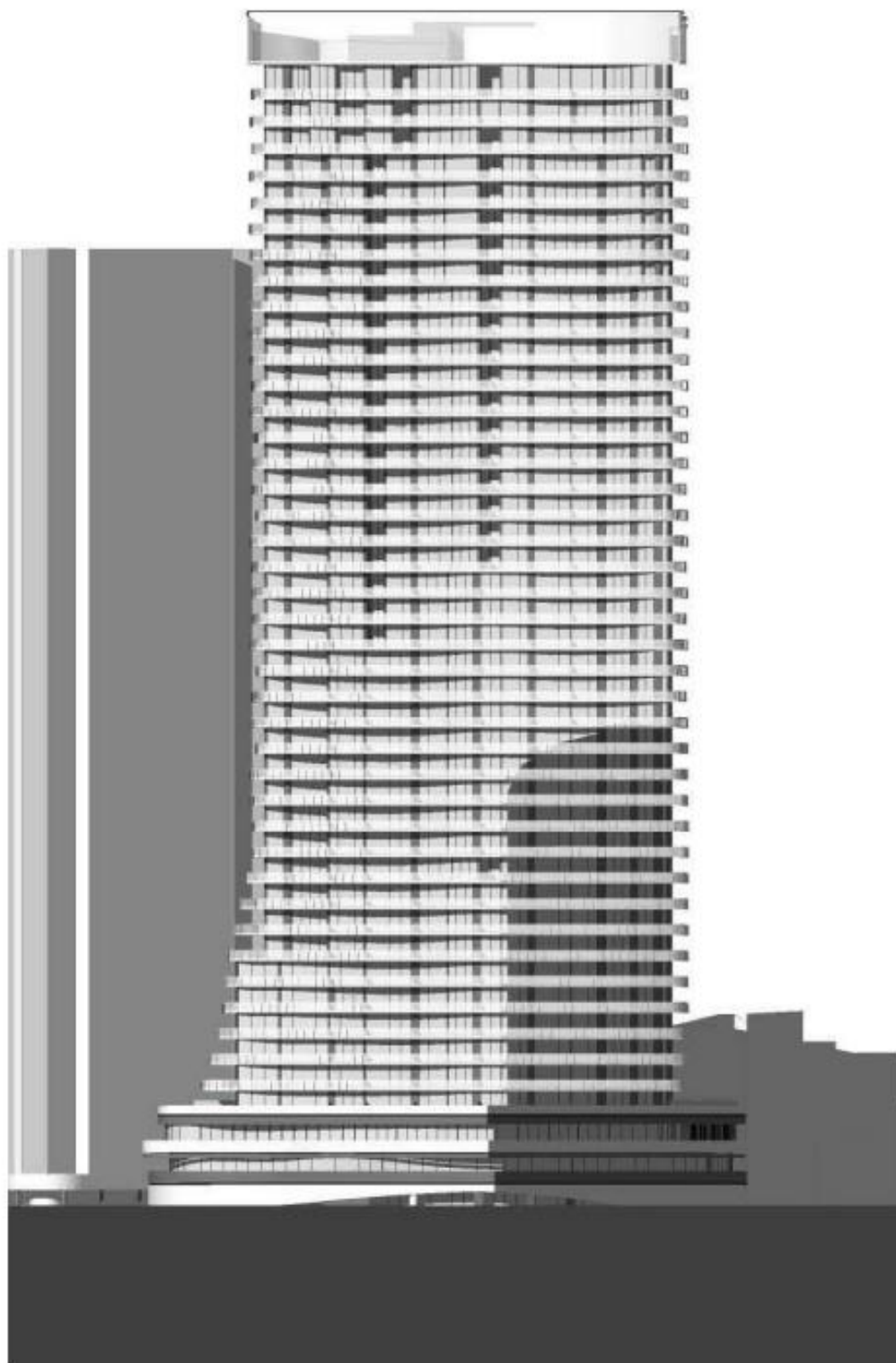
1.2 Proposed Development Description

From the plans provided the proposed development contains the following.

- Eight levels of basement car parking;
- Commercial tenancies on from Nicholson Lane floor to level 07;
- 429 residential apartments from level 04 to 43.

Figure 2 shows the north elevation view of the proposed development.

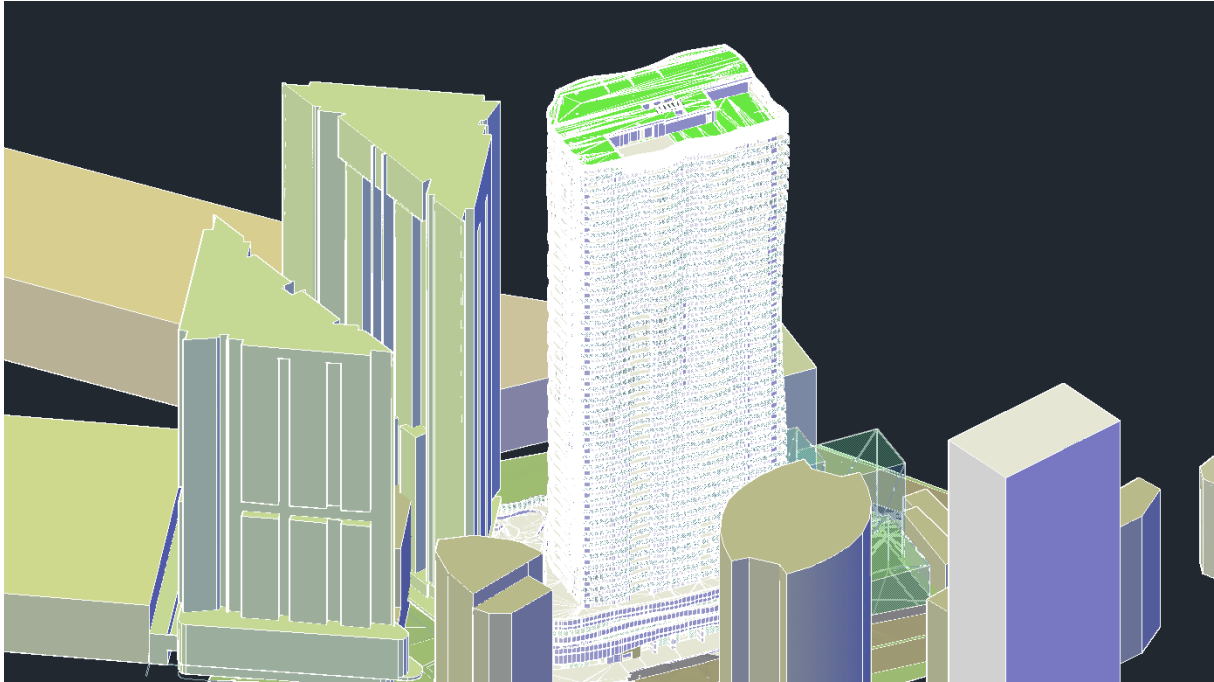
Figure 2 Elevation View



2 SOLAR ACCESS ANALYSIS

Below is the 3D AutoCAD model of the proposed development.

Figure 3 3D Modelling in AutoCAD, viewed from the northeast.



Medium to high rise surround building were included. The calculations were made using the drawings A.DA104 – A.DA143 floor plans dated the 29th of September 2017.

3 SOLAR ACCESS TO RESIDENTIAL BUILDINGS

3.1 Daylighting Considerations

The Apartment Design Guide is relevant to the assessment of the daylight access into residential components of the developments in question. The above regulation states that:

- Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.
- In all other areas, living rooms and private open spaces of at least 70% of the apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter.
- A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.

SLR has been instructed to assess against current apartment design guide solar access requirements. Specific interest therefore lies in the solar access through the living areas windows and balconies of residential apartments during the winter solstice, June 21 between the hours of 9.00 am and 3.00 pm.

3.2 9.00 am – 3.00 pm on the Winter Solstice 21st June

Using sun's eye view diagrams were generated for each 15 minute interval between 9.00 am and 3.00 pm on the Winter Solstice (21st June). These can be seen in **Appendix A**.

Results of solar access to the living rooms and private open spaces of apartments in the assessed buildings on June 21st (winter solstice) between the hours of 9.00 am and 3.00 pm inclusive are summarised in the table below.

Table 1 Solar Access Summary using 2 hour criterion between 9.00am to 3.00pm on June 21st

Block	Number of Apartments	Number of Apartments with at least 2hr of direct sunlight	Percentage of Apartments with at least 2hr of direct sunlight
Main	429	276	64.34%

Table 2 Solar Access Summary using “no direct sunlight” criterion between 9.00am to 3.00pm on June 21st

Block	Number of Apartments	Number of Apartments without direct sunlight	Percentage of Apartments without direct sunlight
Main	429	104	24%

4 CONCLUSIONS

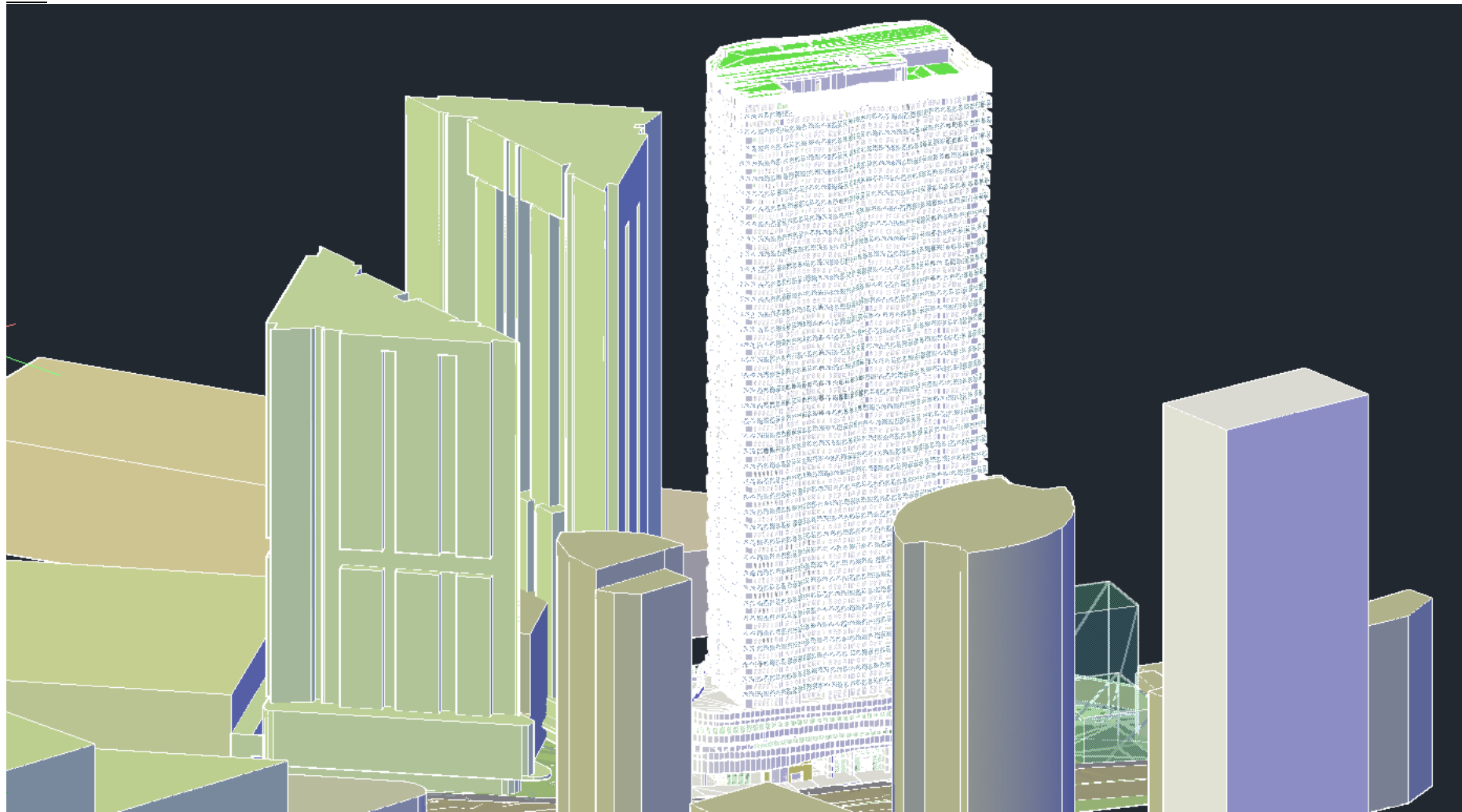
SLR has been engaged by NHVIMG Pty Ltd to conduct a detailed solar access analysis of the proposed development at 500-520 Pacific Hwy, St Leonards.

The Apartment Design Guide is relevant to the assessment of the daylight access into residential components of the developments in question. The above regulation states that:

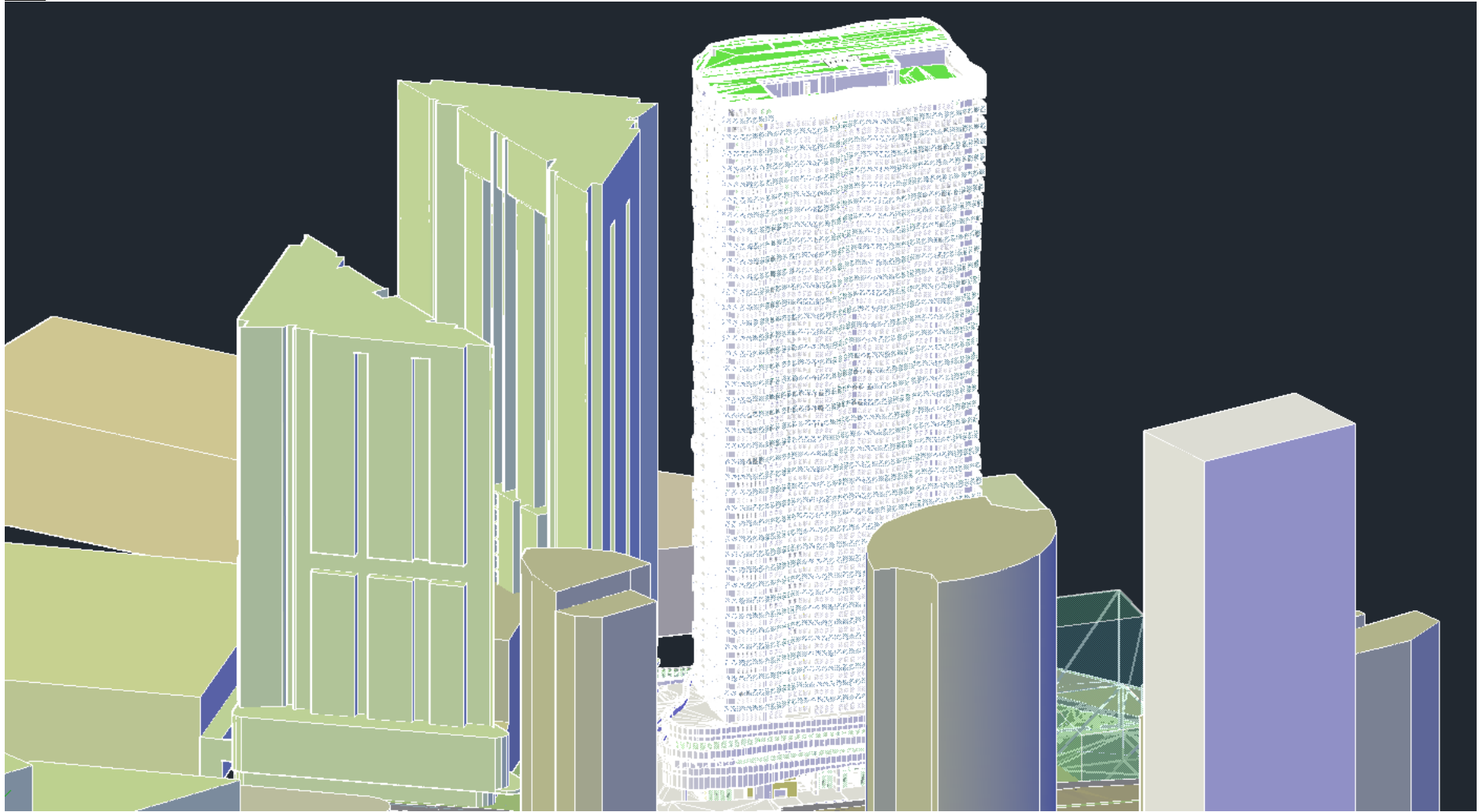
- Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.
- In all other areas, living rooms and private open spaces of at least 70% of the apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter.
- A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.

From the model provided, SLR has calculated that 2 hours of direct sunlight will reach approximately 64.34% of the apartments and the percentage of apartments without direct sunlight is 24%.

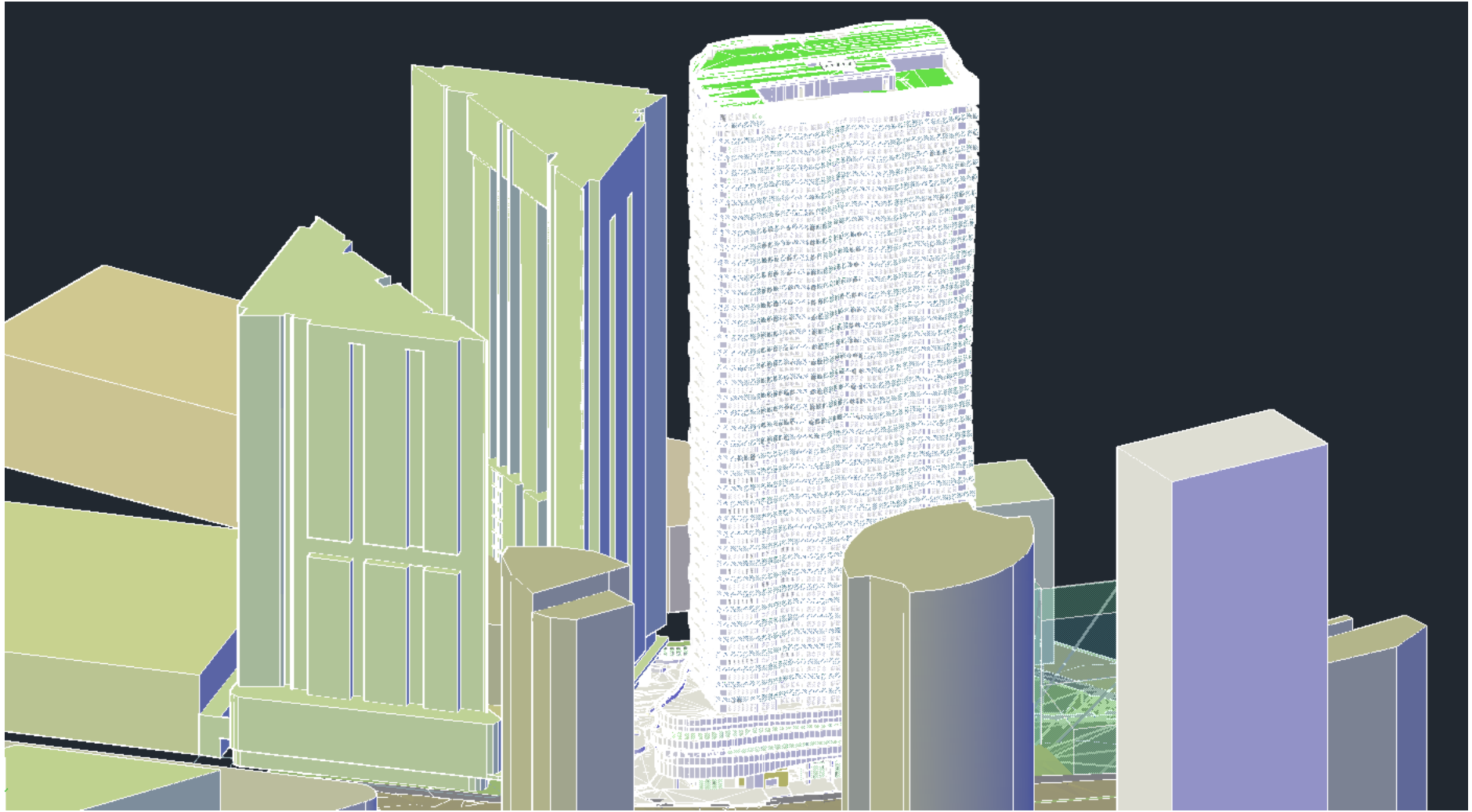
9:00



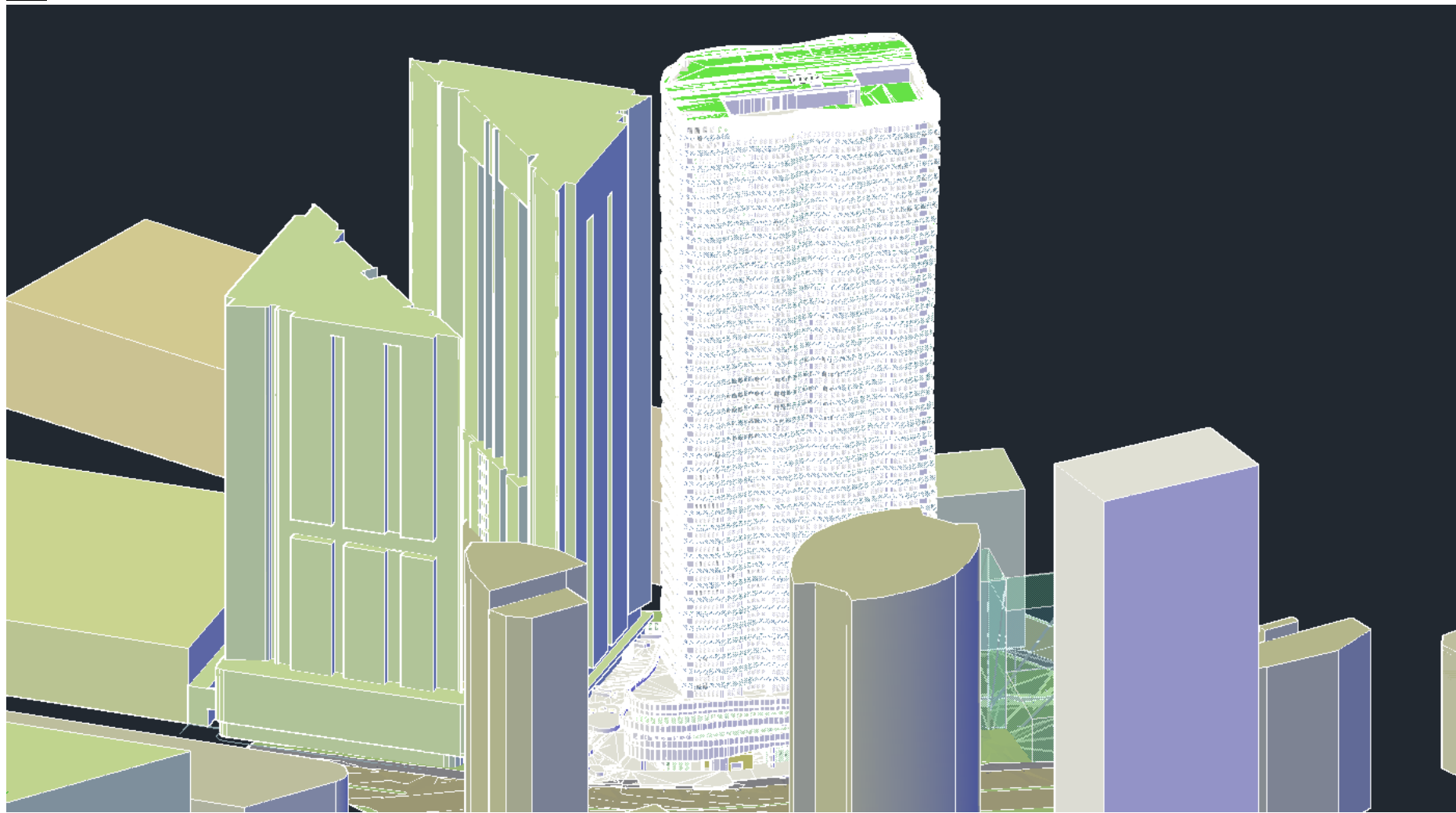
9:15



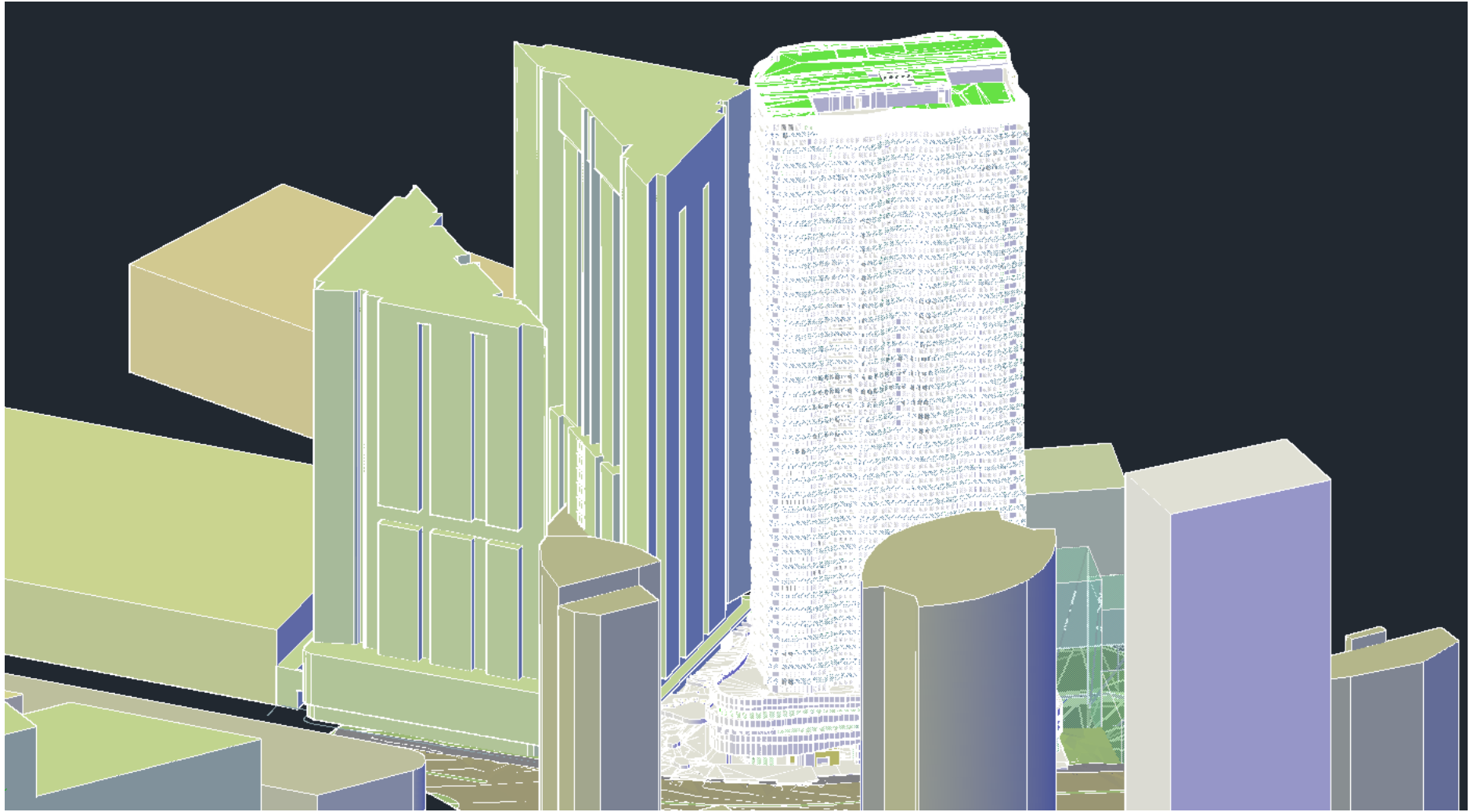
9:30



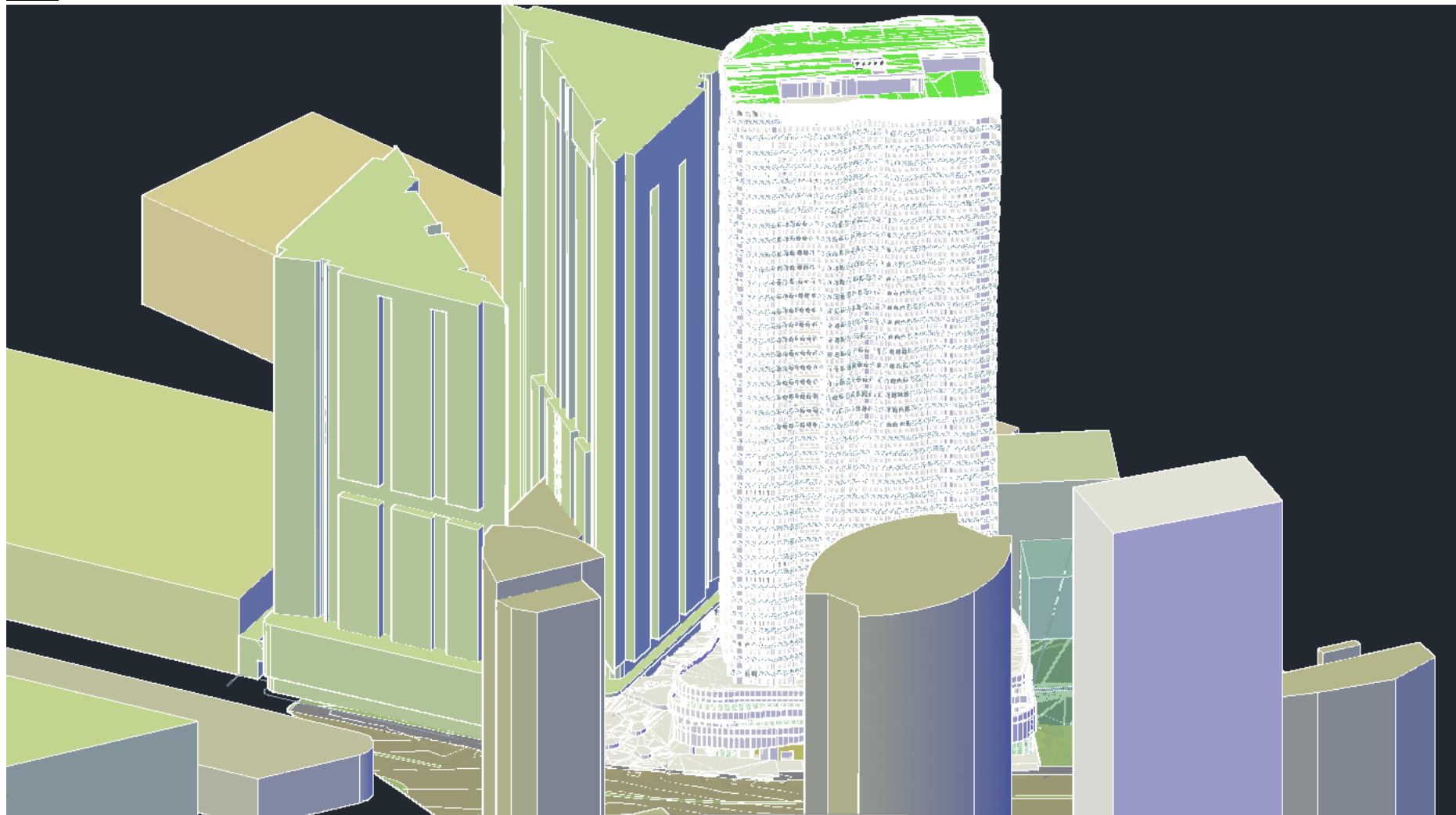
9:45



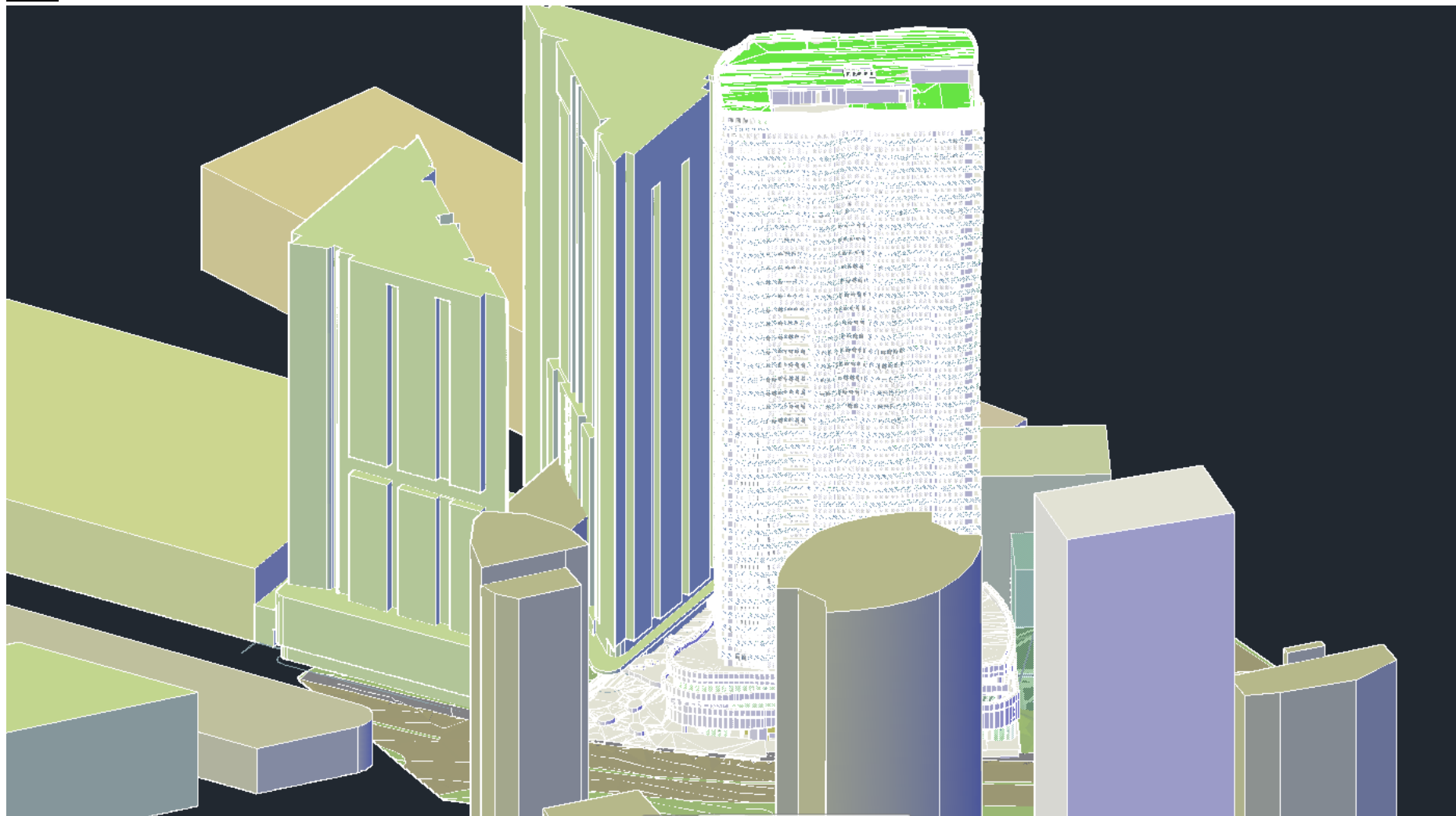
10:00



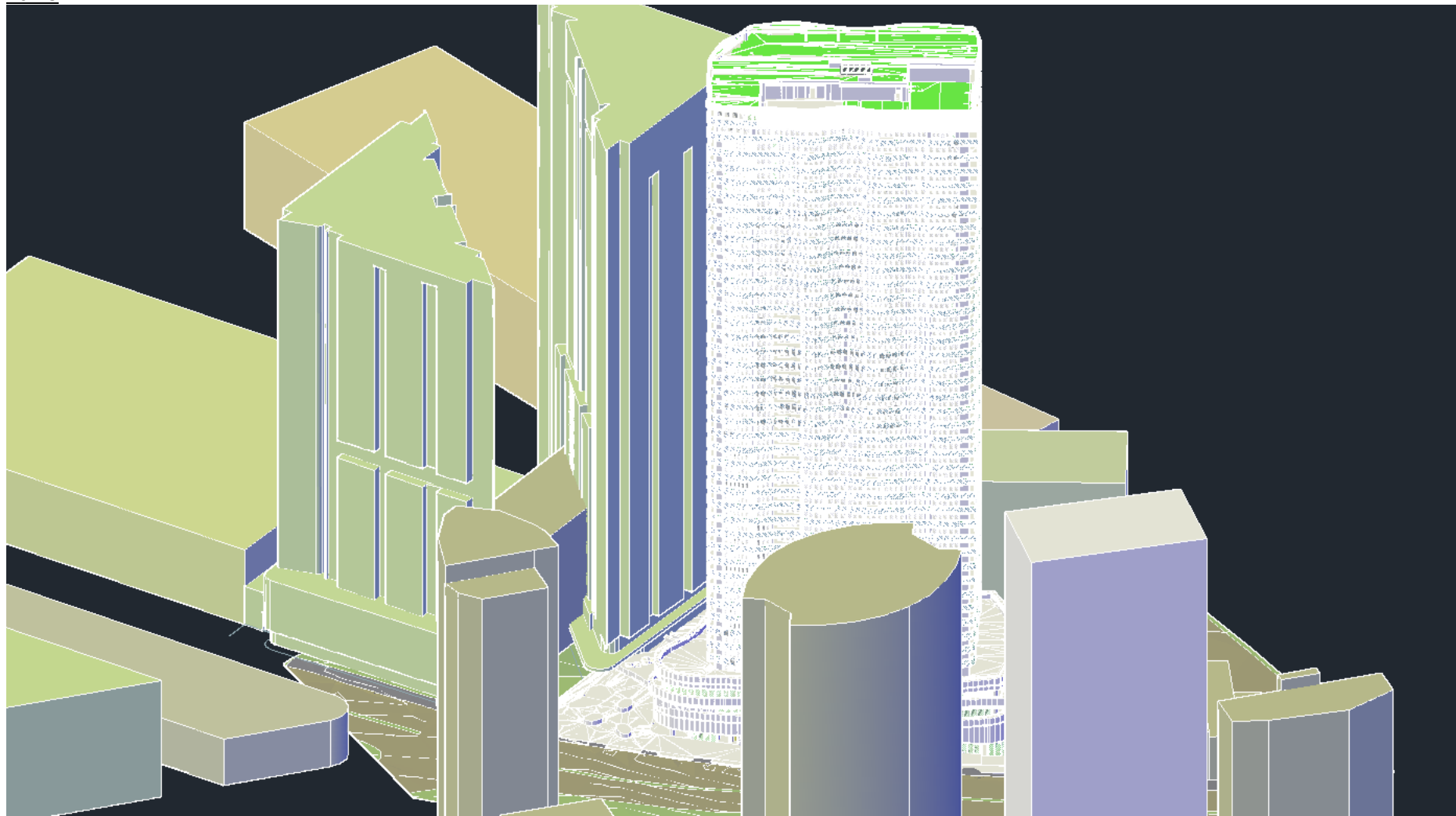
10:15



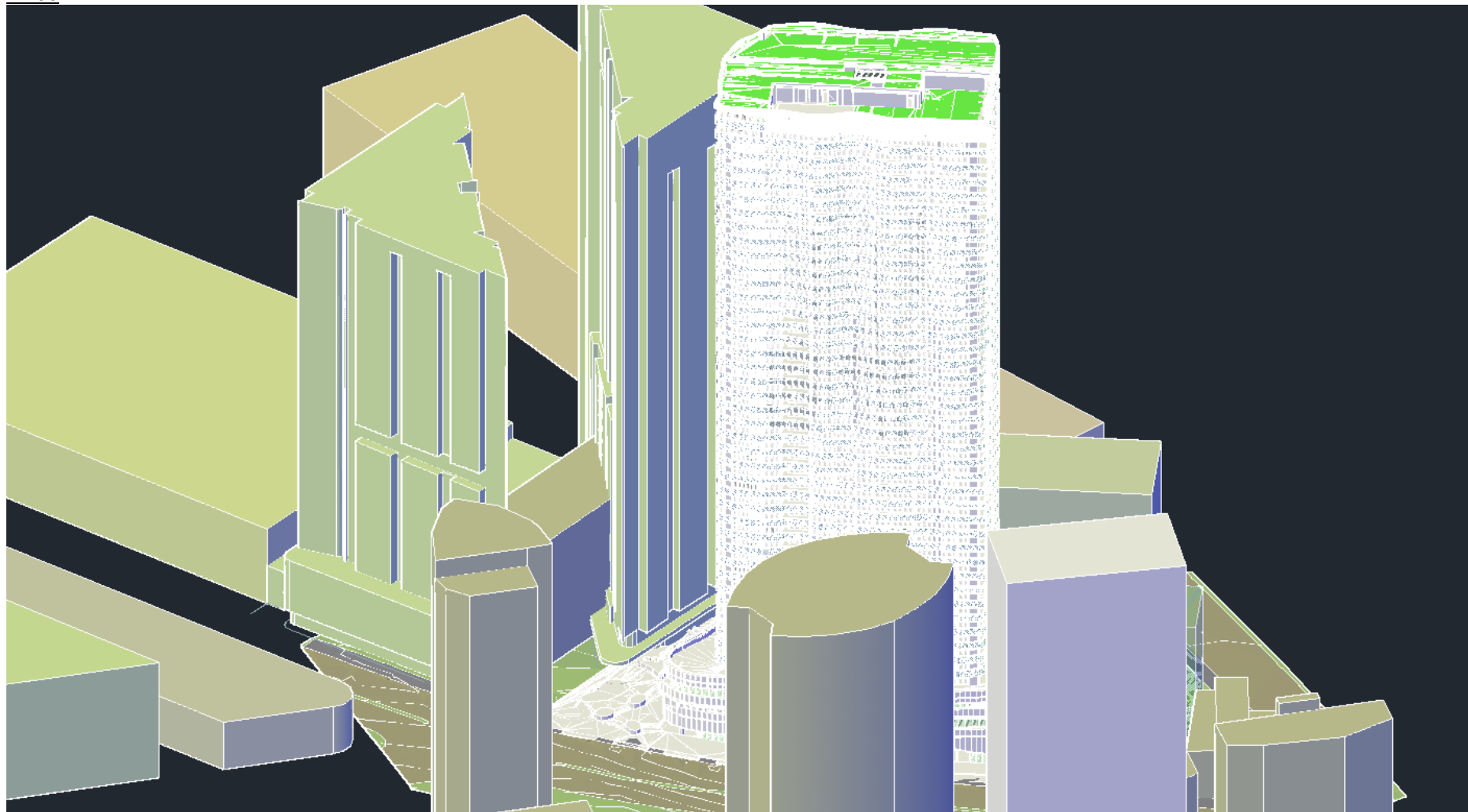
10:30



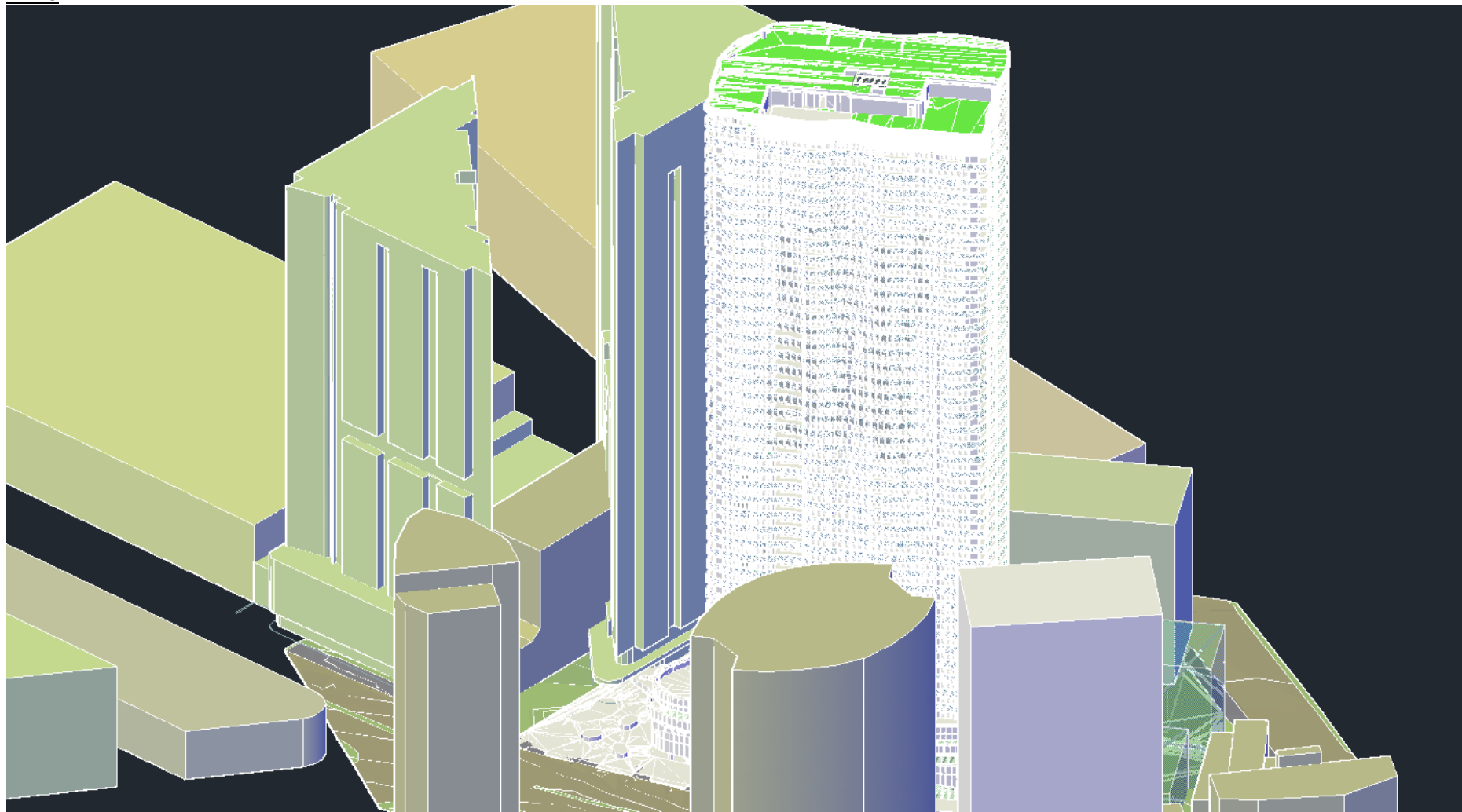
10:45



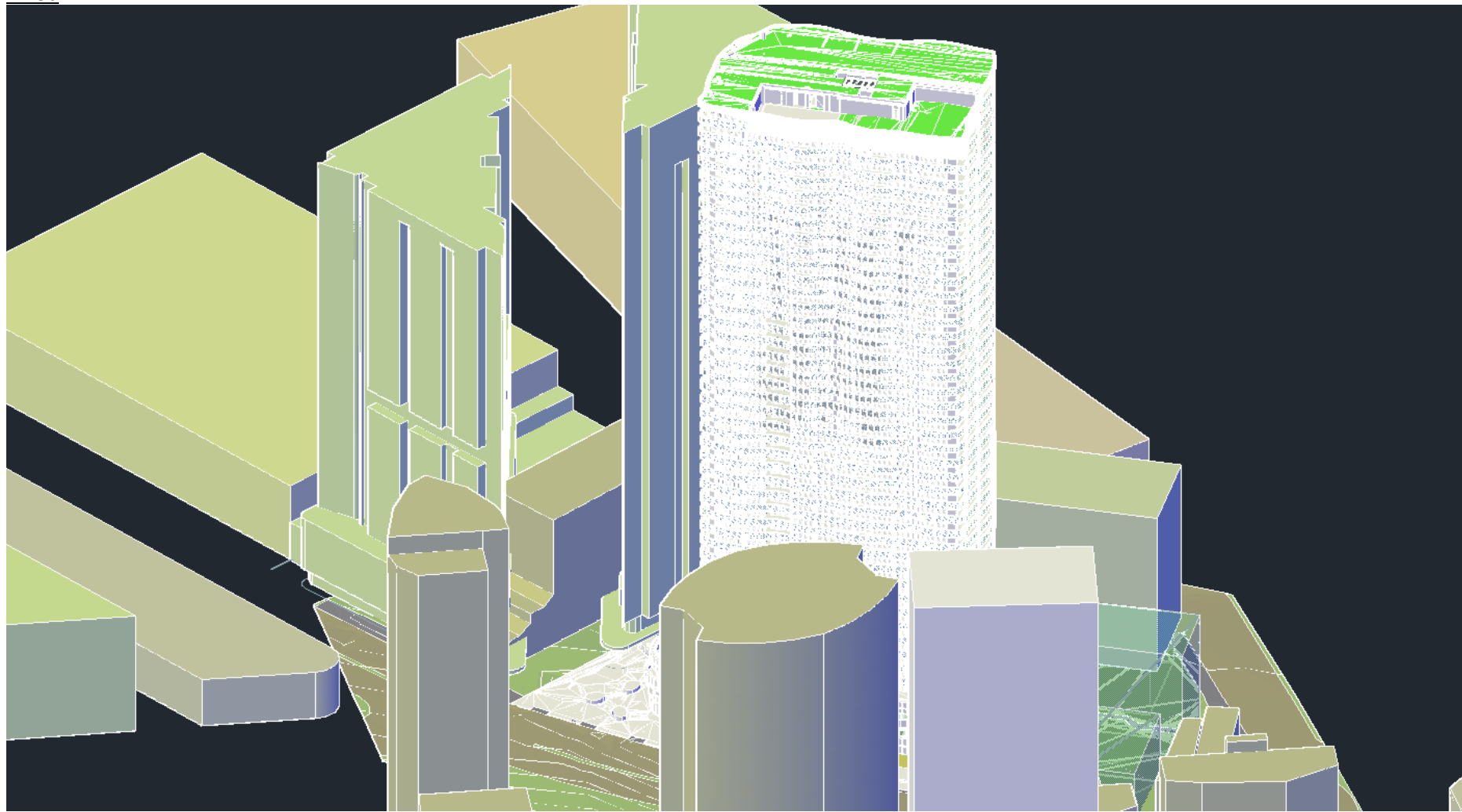
11:00



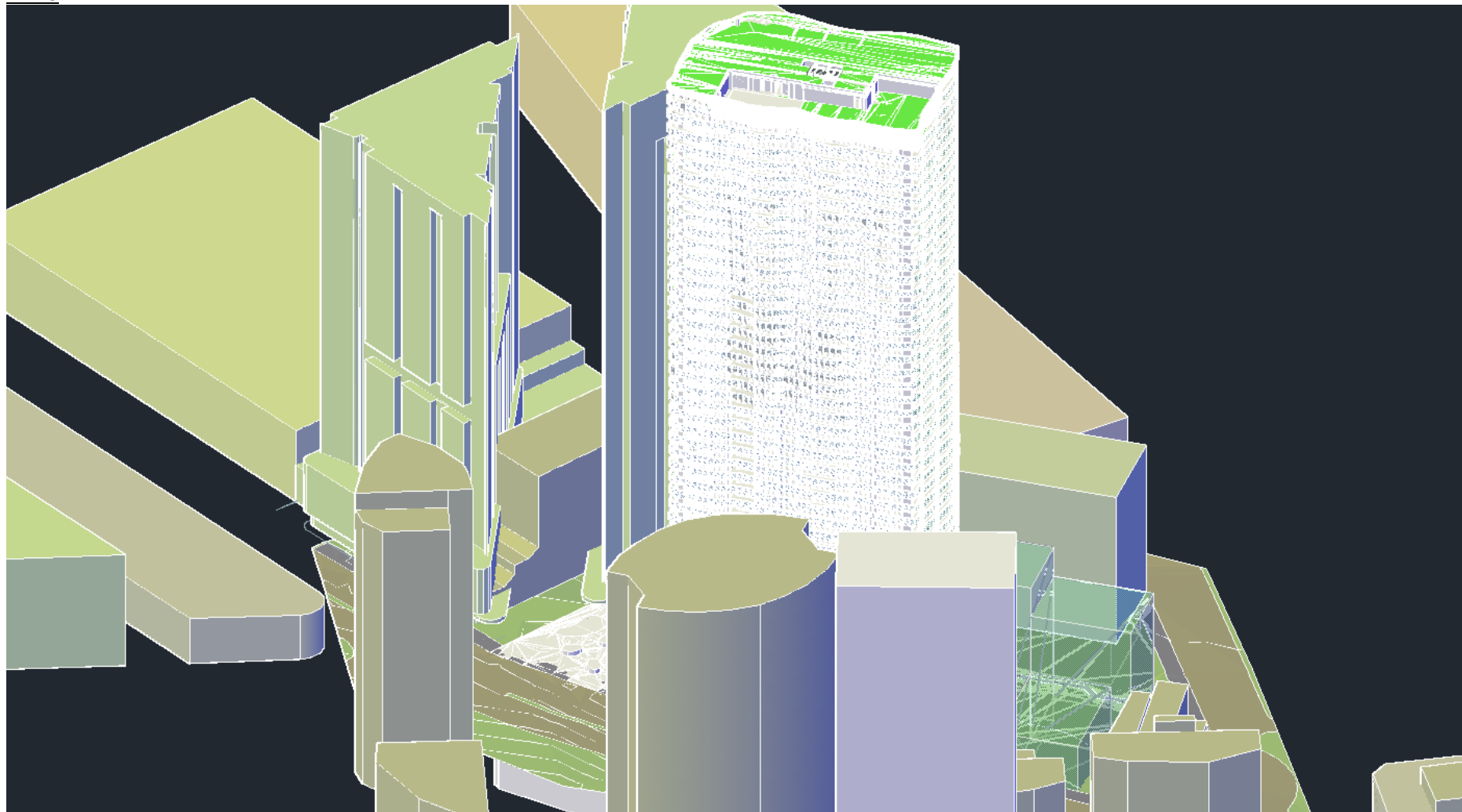
11:15



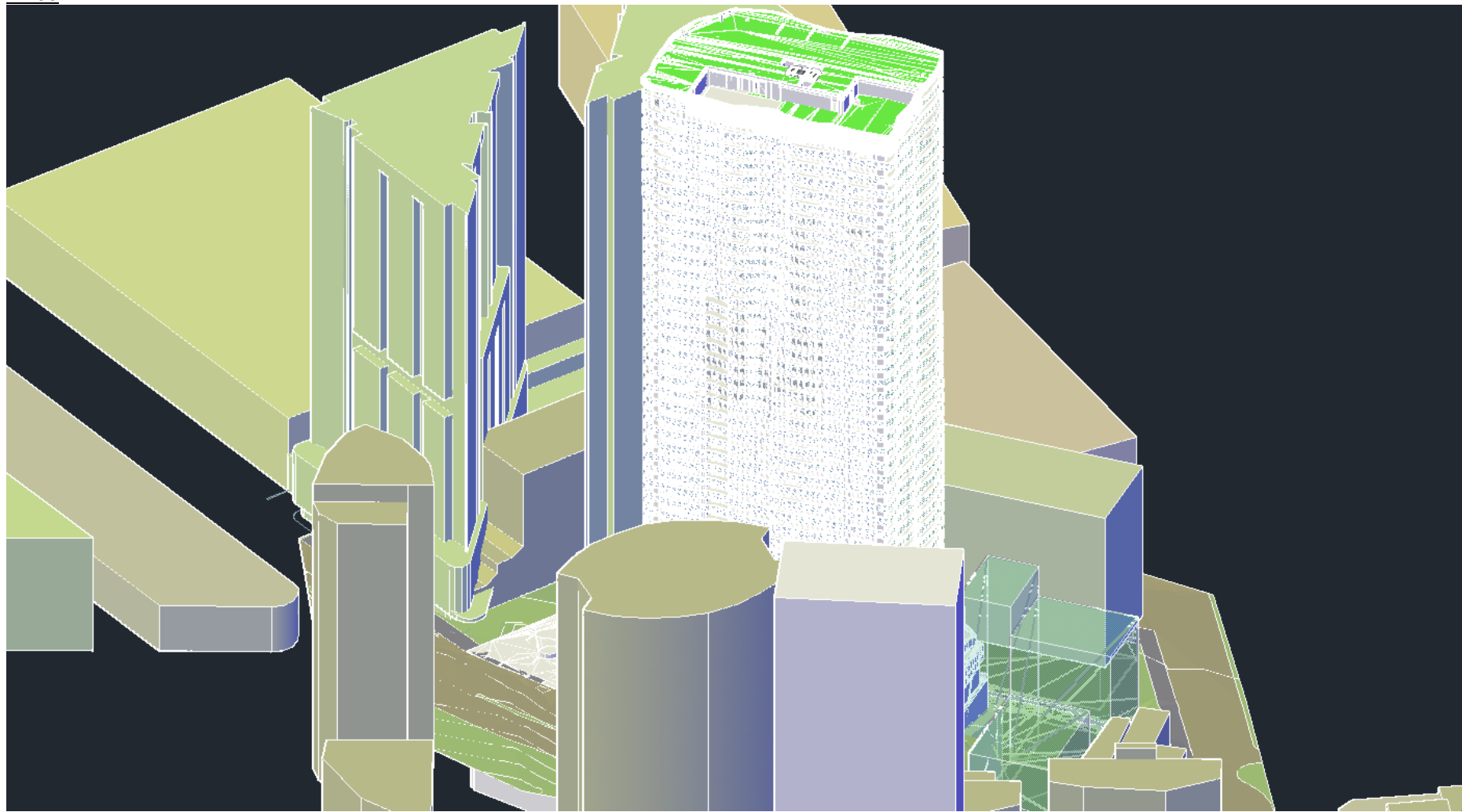
11:30



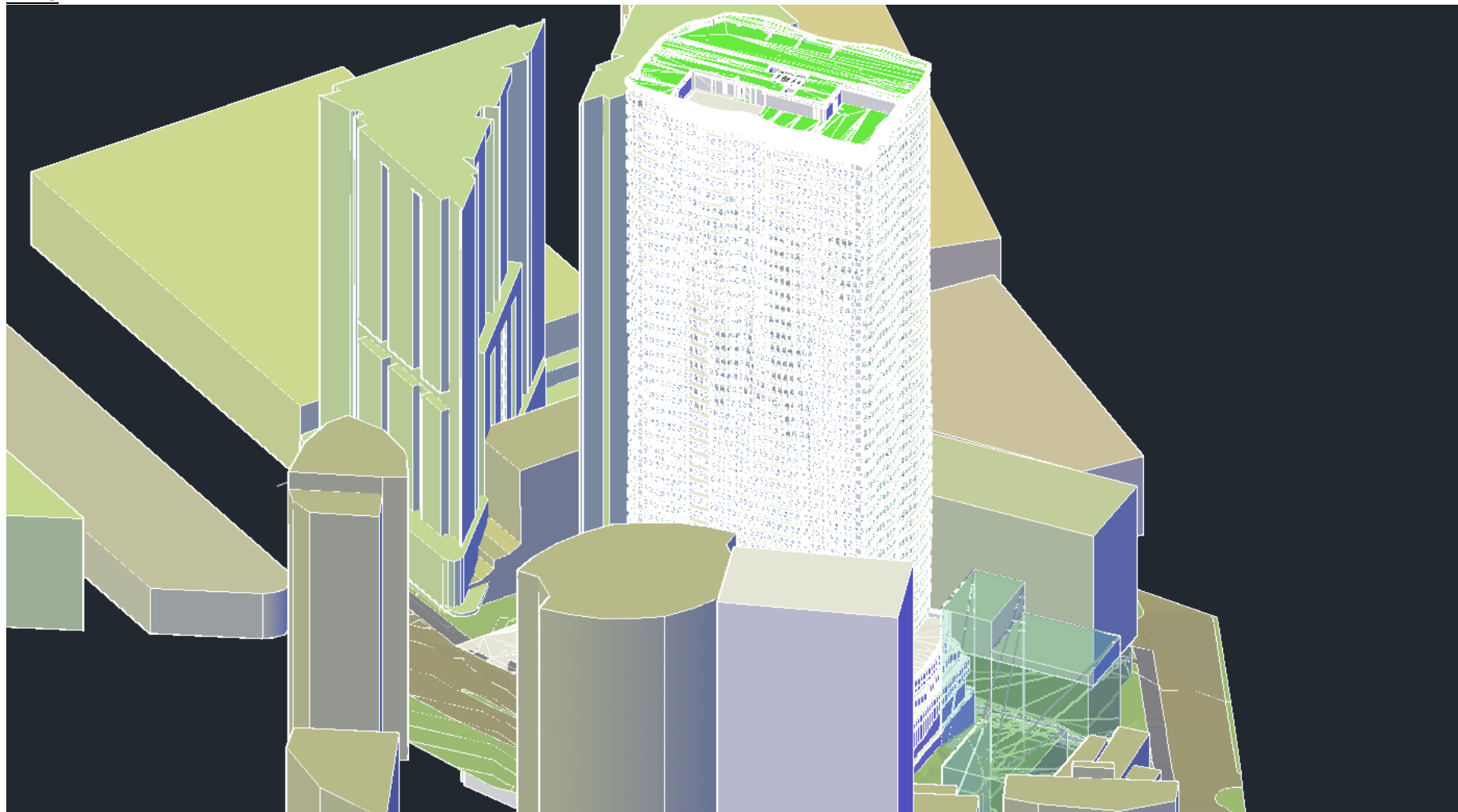
11:45



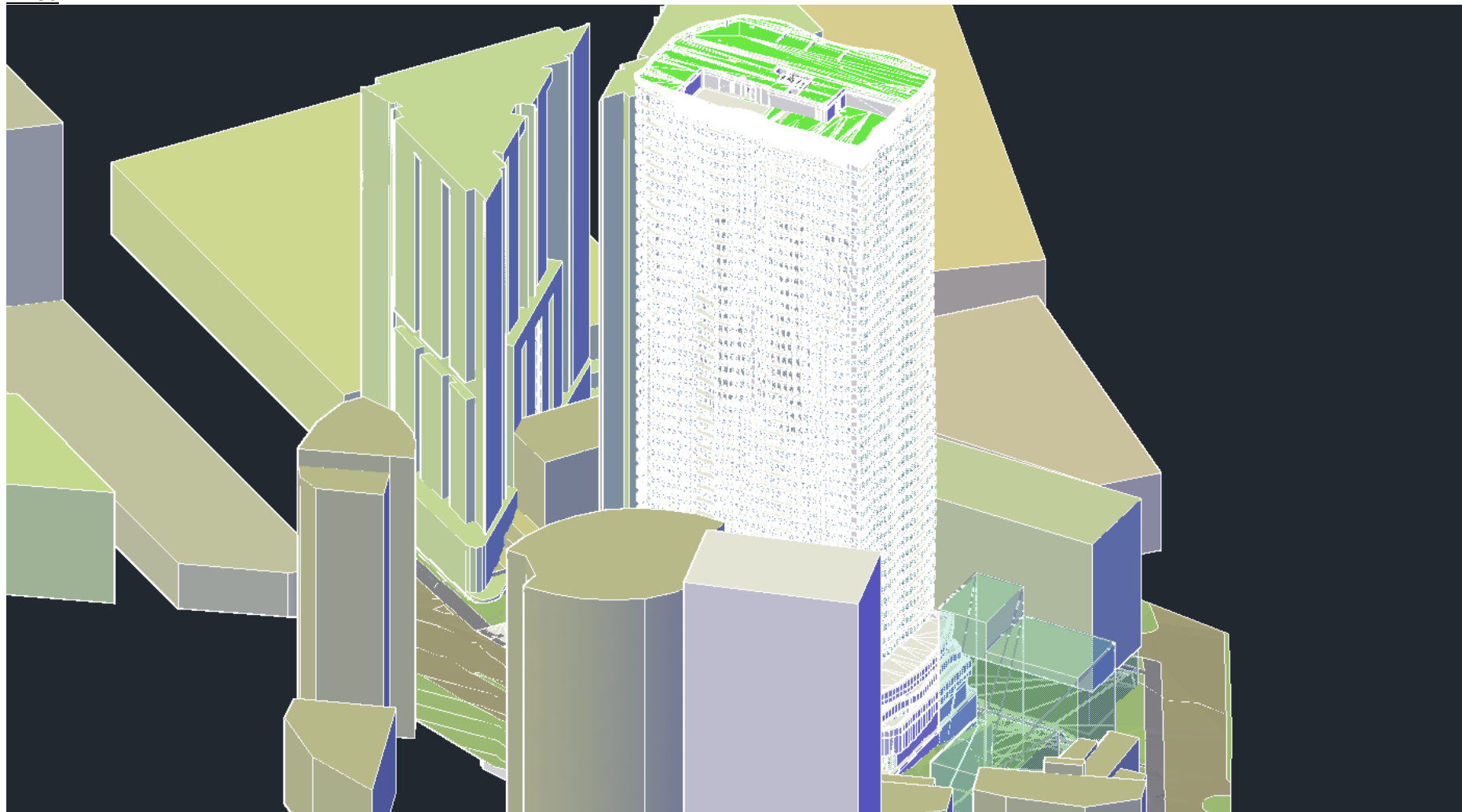
12:00



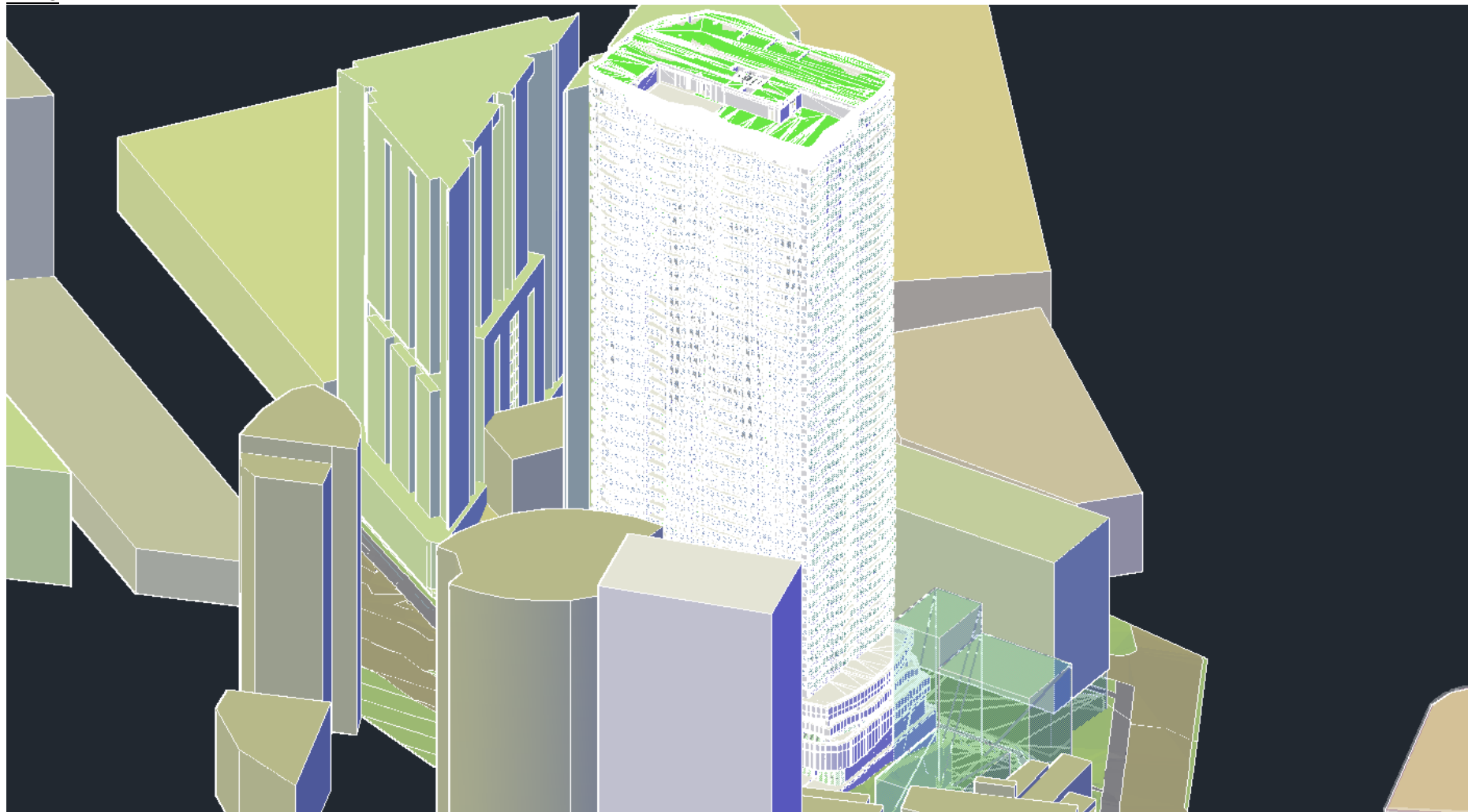
12:15



12:30



12:45



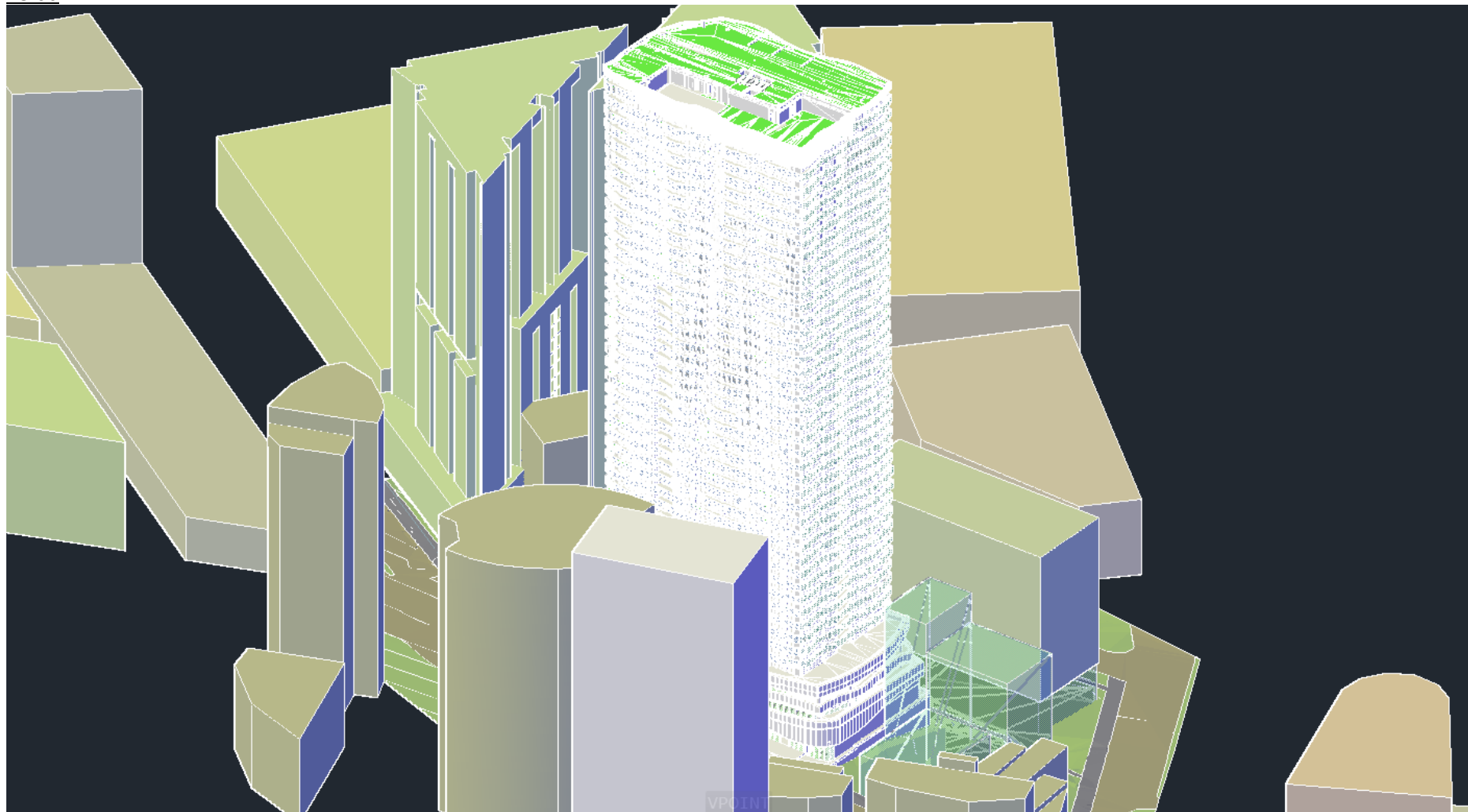
Appendix A

Report Number 610.15946-R02

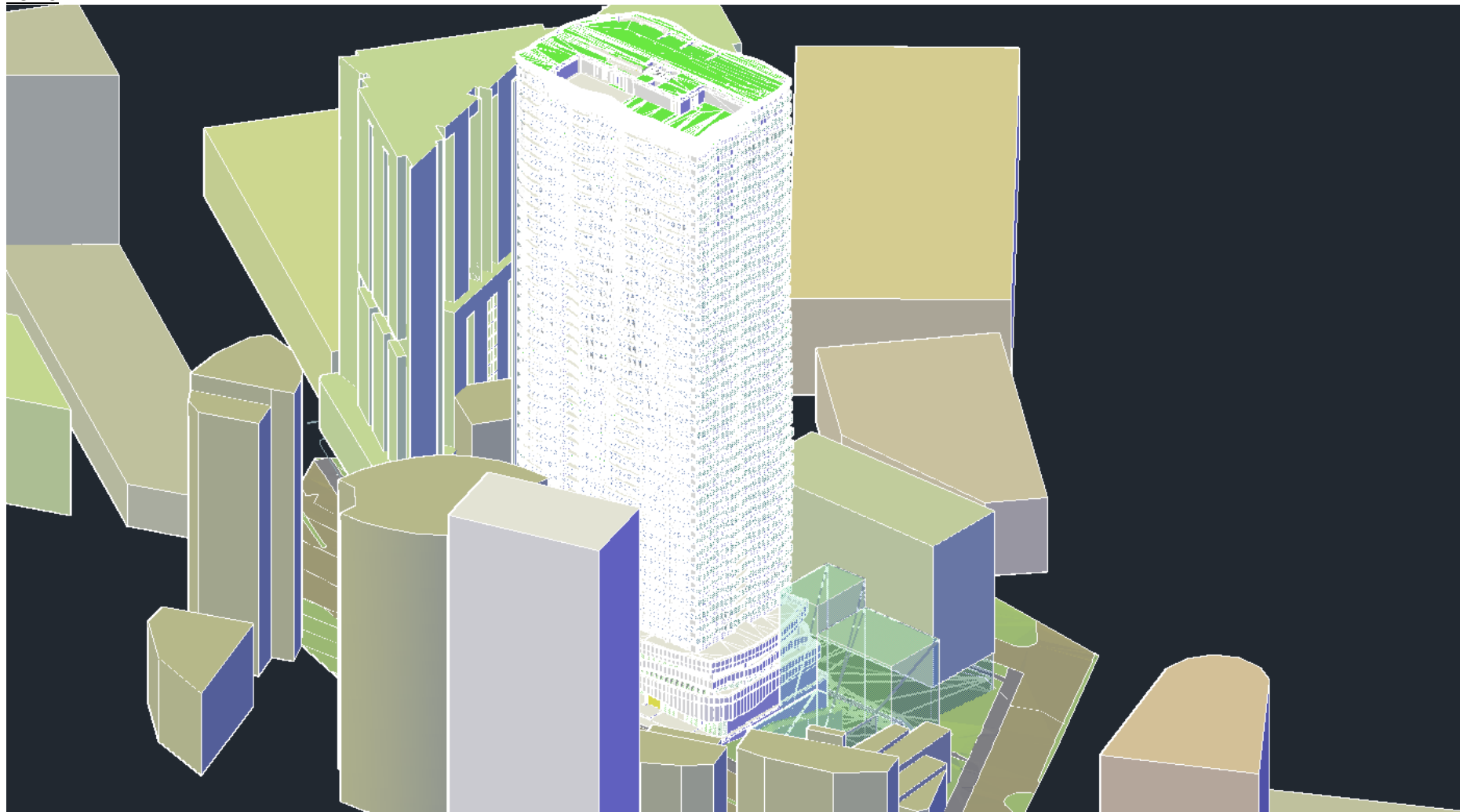
Page 17 of 25

SUN EYE VIEWS

13:00



13:15



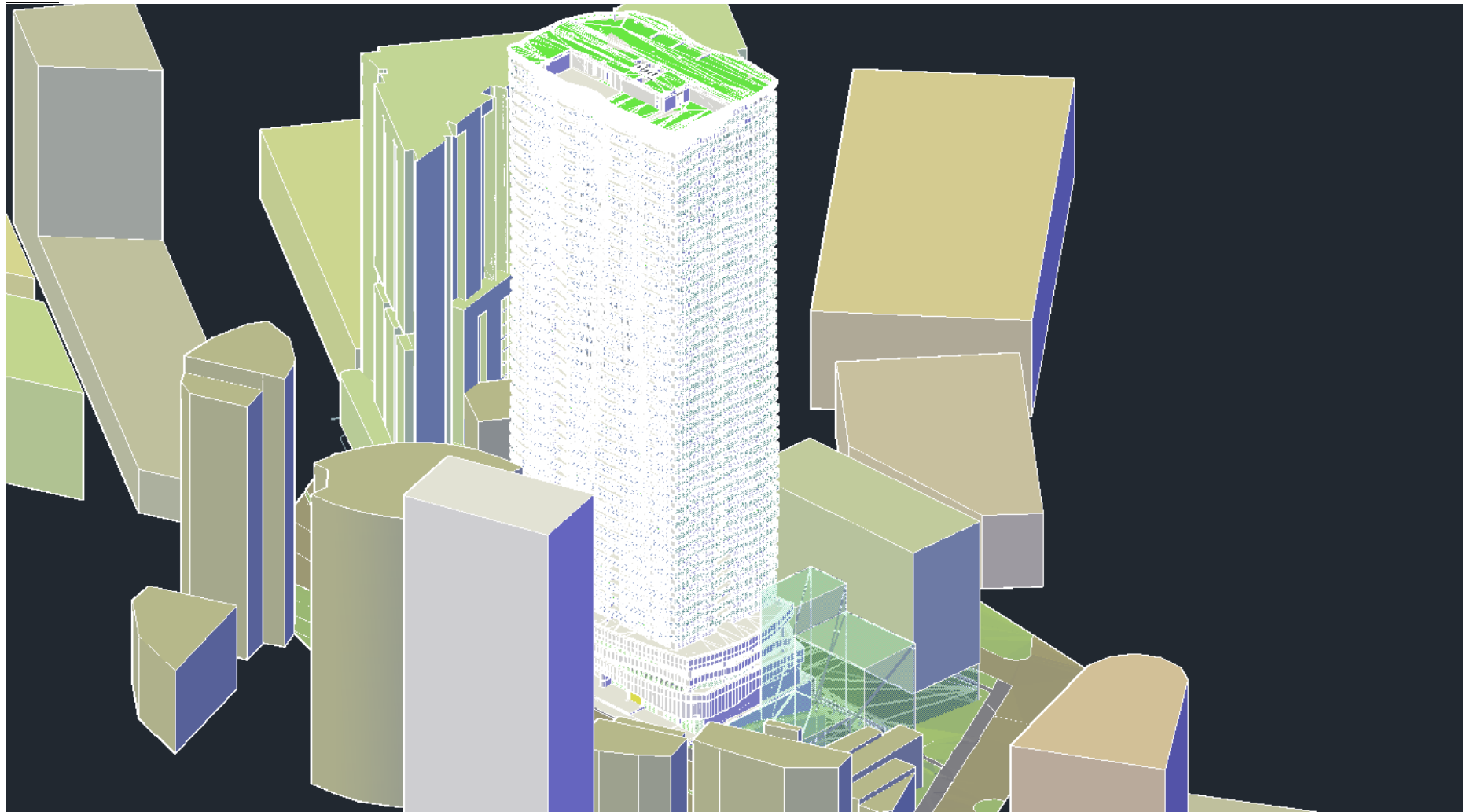
Appendix A

Report Number 610.15946-R02

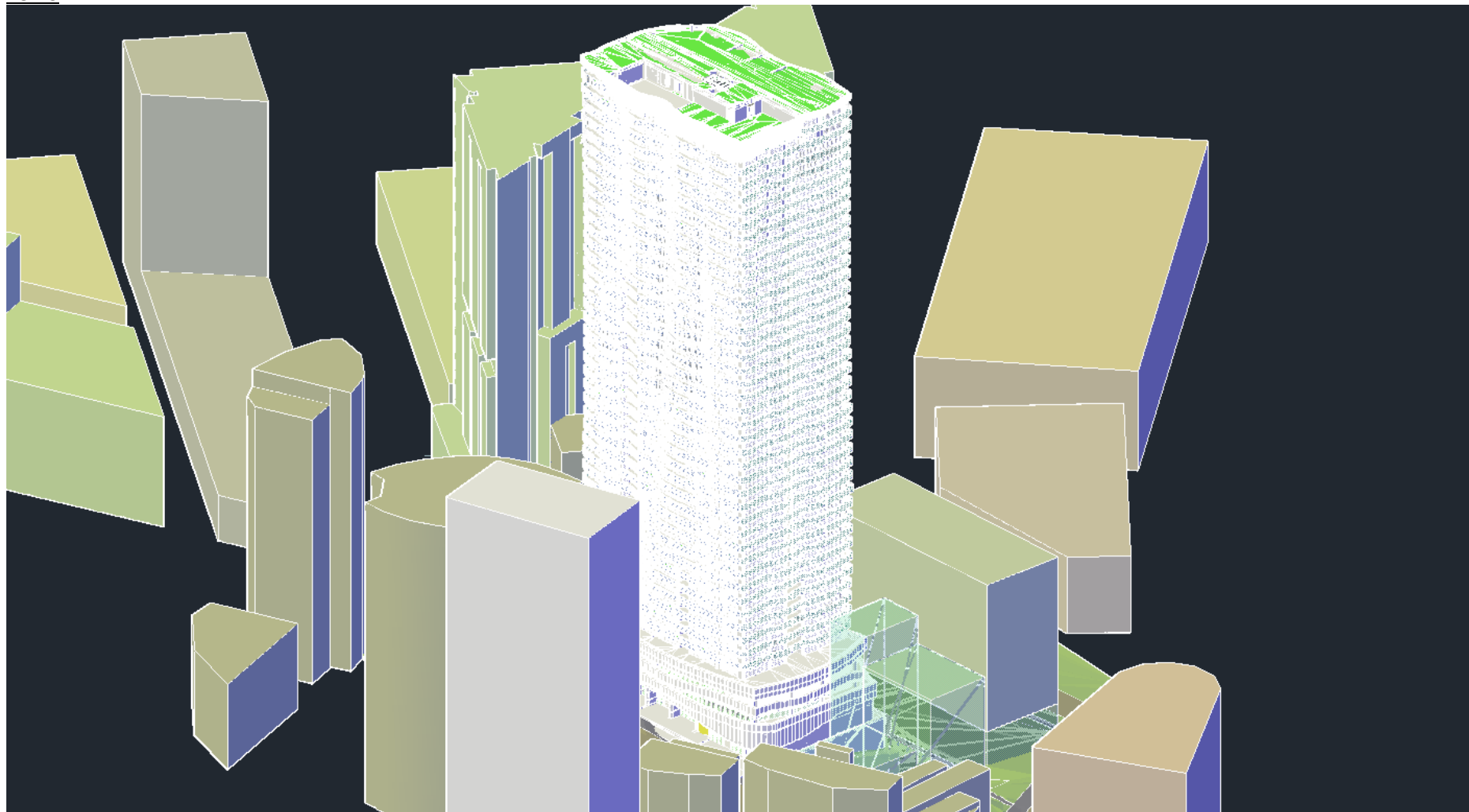
Page 19 of 25

SUN EYE VIEWS

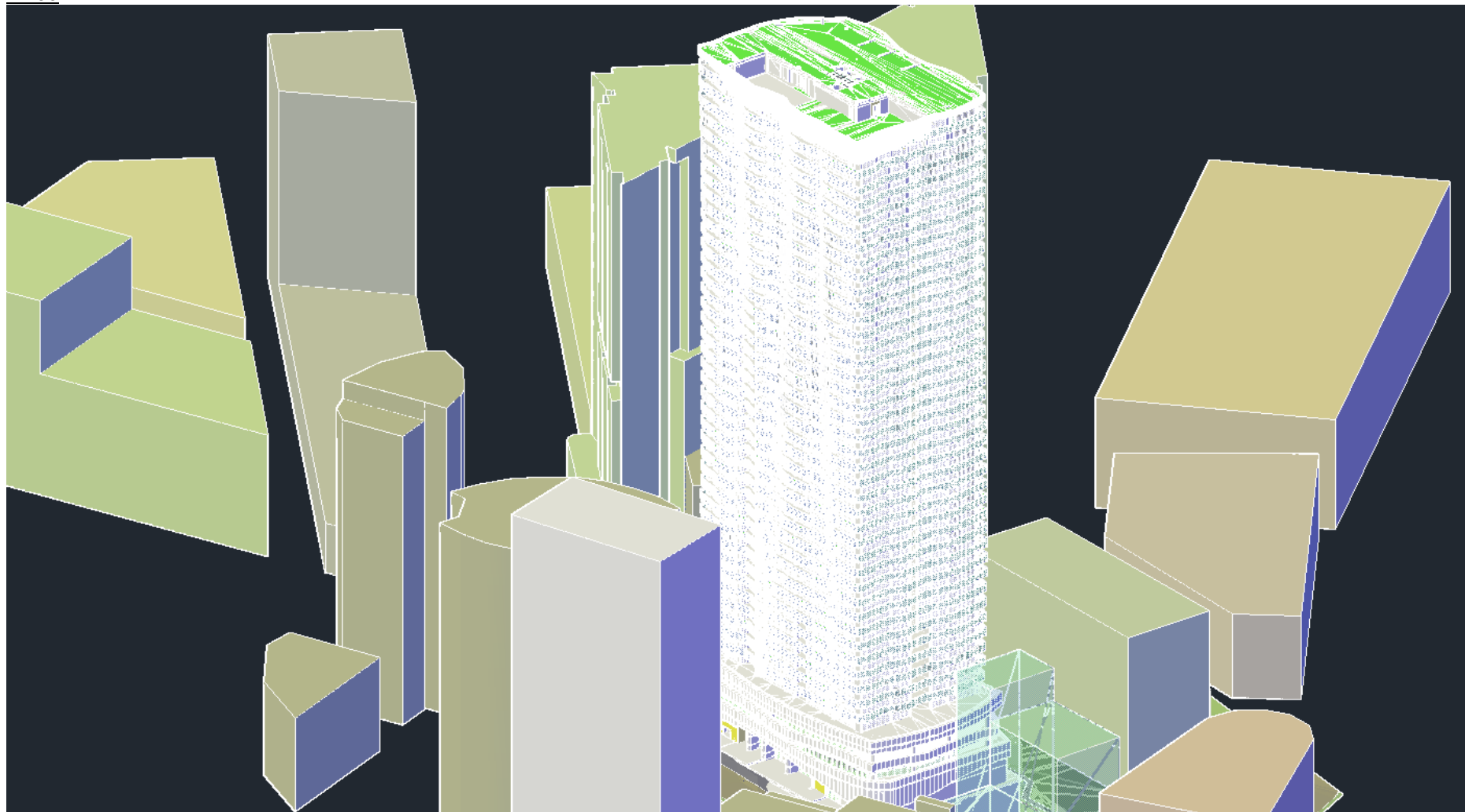
13:30



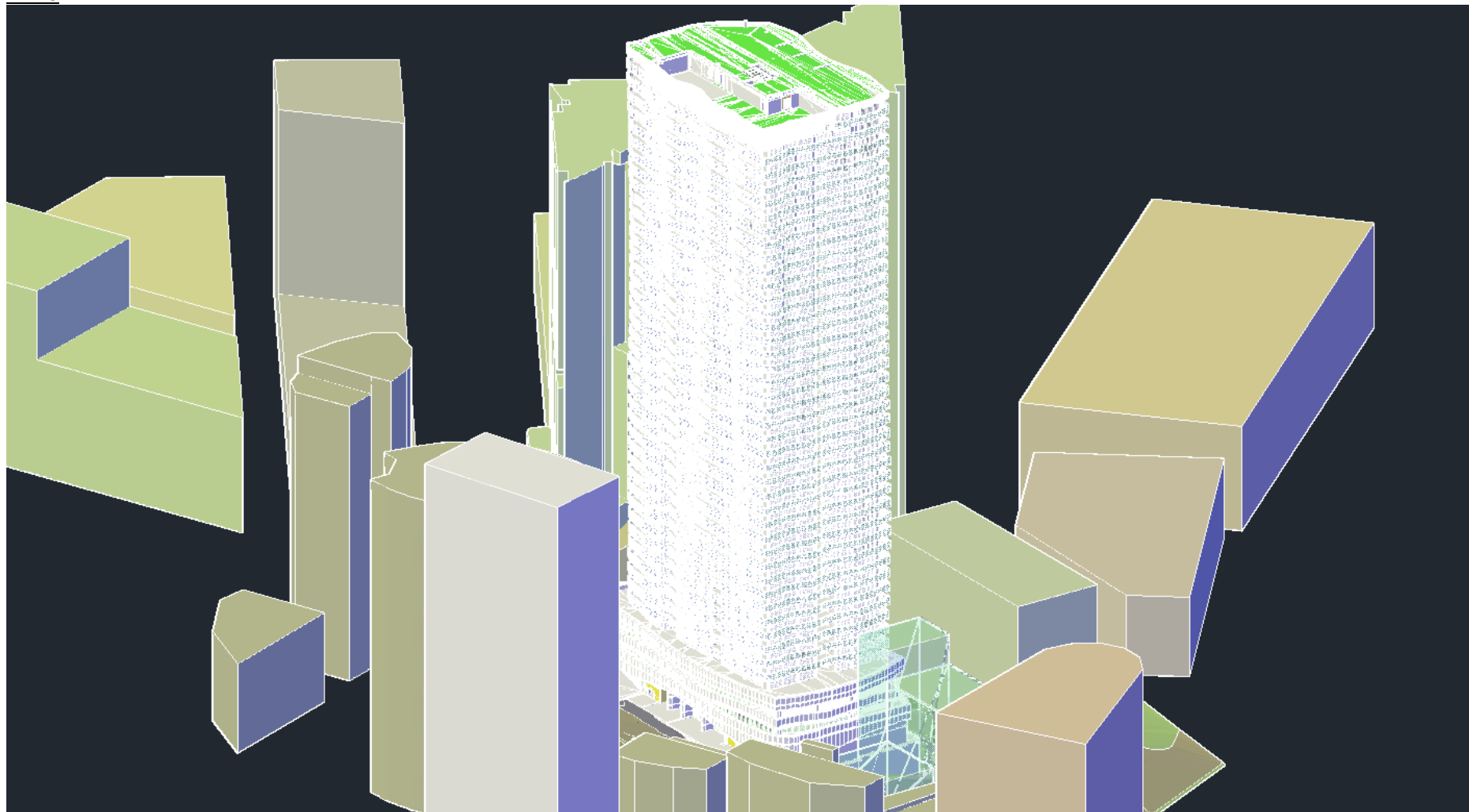
13:45



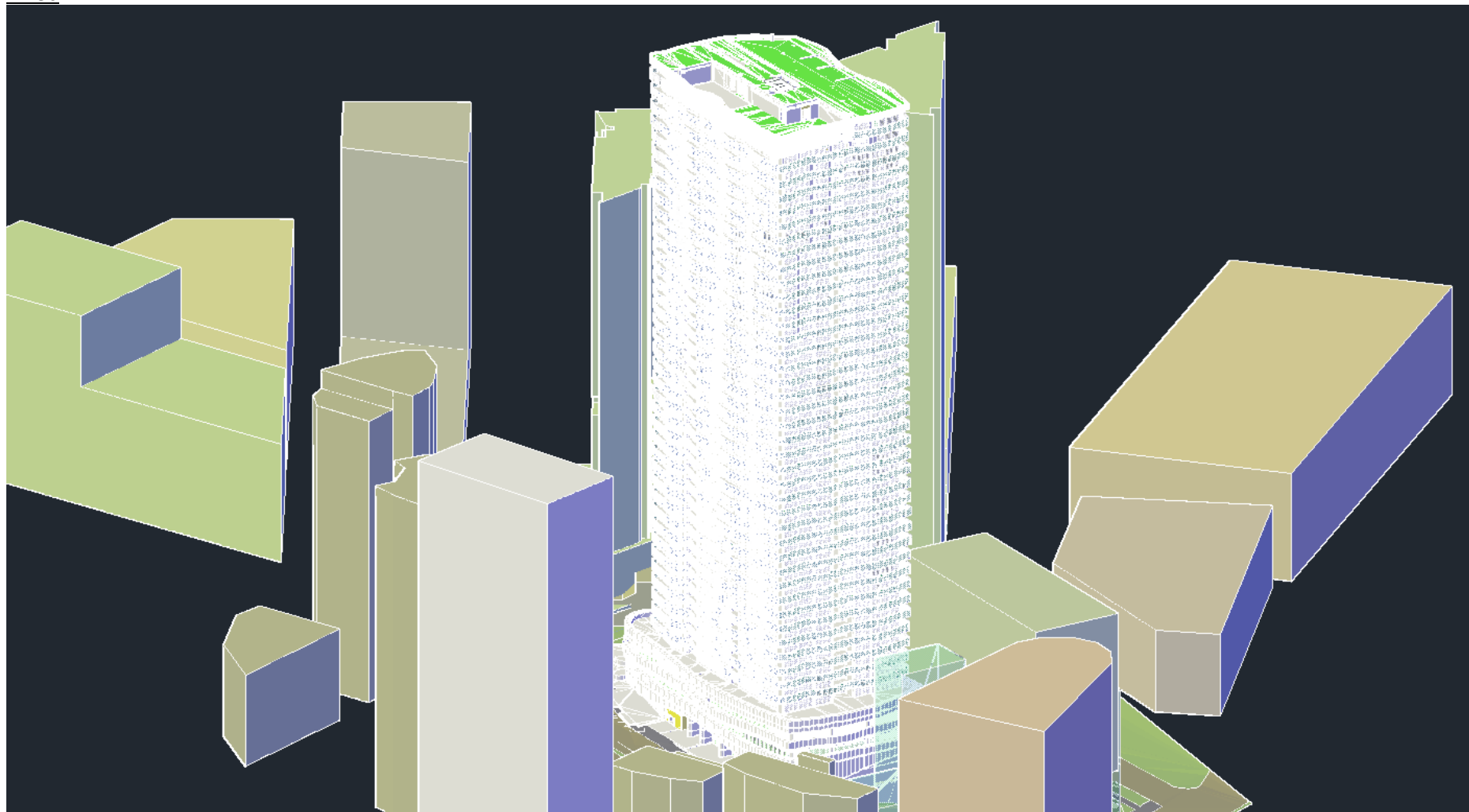
14:00



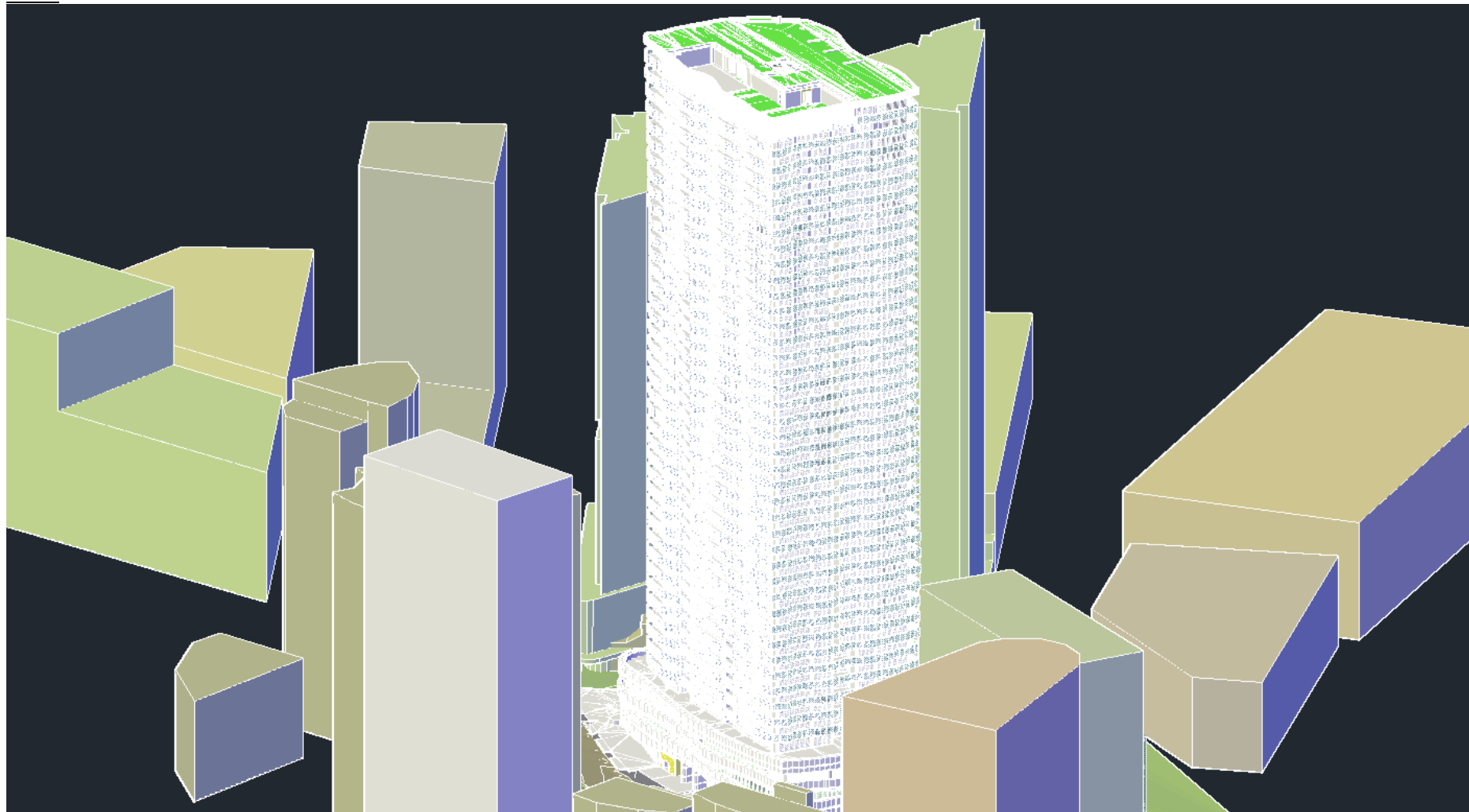
14:15



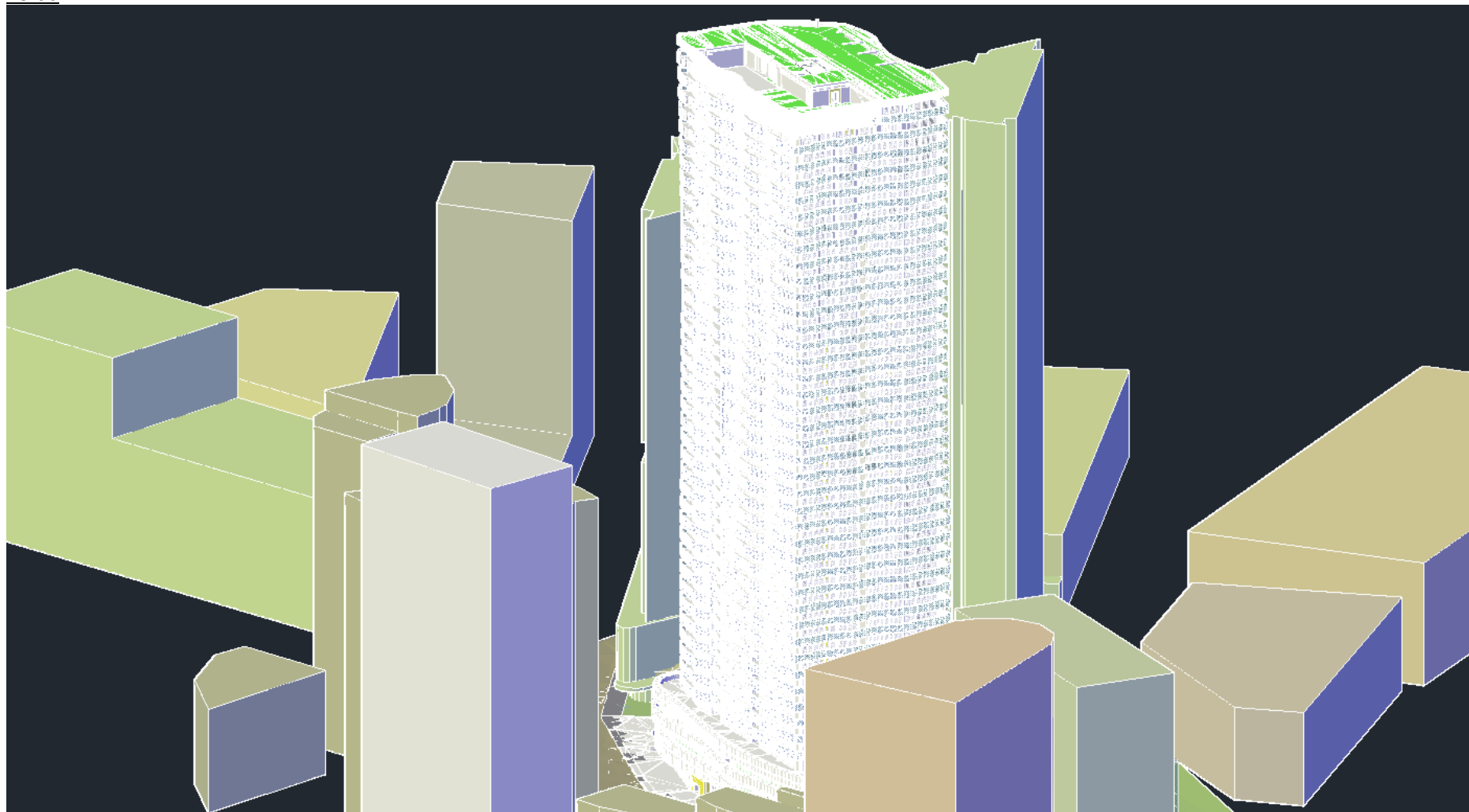
14:30



14:45



15:00



Appendix B

Report Number 610.15946-R02

Page 1 of 1

DETAILED SOLAR ACCESS CALCULATIONS

Hepples Pty Ltd

