

An aerial photograph of the Arncliffe area in NSW, Australia, showing a mix of residential housing, industrial buildings, and green spaces. The image is dark and serves as a background for the text.

Cooks Cove Planning Proposal VIA, 19 Marsh St, Arncliffe NSW 2205

View impact renderings and methodology report

12 September 2023

VIRTUAL IDEAS

1. INTRODUCTION

This document was prepared by Virtual Ideas to demonstrate the view impact of the proposed masterplan development schemes for Cooks Cove with the respect to the existing built form and site conditions.

2. VIRTUAL IDEAS EXPERTISE

Virtual Ideas is an architectural visualisation company that has over 15 years experience in preparing visual impact assessment content and reports on projects of major significance that meet the requirements for relevant local and state planning authorities.

Our reports have been submitted as evidence in proceedings in both the Land and Environment Court and the Supreme Court of NSW. Our director, Grant Kolln, has been an expert witness in the field of visual impact assessment in the Supreme Court of NSW.

Virtual Ideas' methodologies and outcomes have been inspected by various court appointed experts in relation to previous visual impact assessment submissions, and have always been found to be accurate and acceptable.

3. RENDERINGS METHODOLOGY

The following describes the process that we undertake to create the renderings that form the basis of this report.

3.1 DIGITAL 3D SCENE CREATION

The first step in our process is the creation of an accurate, real world scale digital 3D scene that is positioned at a common reference points using the MGA 56 GDA 2020 coordinates system.

We have used data including existing, approved and proposed building 3D models to create the 3D scene. A detailed description of the data sources used in this report can be found in Appendix A, B, C and D.

When we receive data sources that are not positioned to MGA-56 GDA 2020 coordinates, we use common points in the data sources that can be aligned to points in other data sources that are positioned at MGA-56 GDA2020. This can be data such as site boundaries and building outlines.

Descriptions of how we have aligned each data source can also be found in Section 3.2.

3.2 ALIGNMENT OF 3D SCENE

To align the 3D content to the correct geographical location, we used the following data:

- **2004 Height Controls Massing Model** - we imported the 2004 height control fbx file into 3DS max. This was then positioned to the MGA 56(GDA2020) reference system.
- **2006 Concept Masterplan Model** - we initially imported the supplied drawing “PSA7434-A21.dwg” into 3DS Max, which we positioned using the MGA56 (GDA2020) reference system. The supplied 3D model “CCPR-BYD-LA-000002.rvt” was then imported and aligned to the DWG drawing.
- **Current Concept Masterplan Model** - we imported the supplied drawing “CCPR-BYD-LA-000002.dwg” into 3DS Max, which we positioned using using the MGA56 (GDA2020) reference system. This drawing also included the 3D model of the Current Concept Masterplan.
- **Aerometrex LOD19 and LOD20** - this is a licensed photogrammetric scanned 3D Sydney city model, already positioned to the MGA56 (GDA2020) reference system and imported into 3DS Max.
- **Southbank Building 3D model** - we imported the site plan drawing “DW00 Site Plan.pdf” into 3DS Max. We then repositioned this drawing to match the 2006 Concept Masterplan Drawing “PSA7434-A21.dwg” which was already imported and positioned to MGA56 (GDA2020). The Southbank 3D building model was then aligned and positioned to the site plan drawing.
To note, Virtual Ideas posses the Southbank building model as a result of creating visualisation media for the Southbank project.



Image showing the 2006 Master Plan drawing “PSA7434-A21.dwg” (purple) repositioned per MGA 56 GDA2020 coordinates. This aligned with the Aerometrex 3D model. The massing model “CCPR-BYD-LA-000002.rvt” (grey) aligned to the 2006 master plan drawing “PSA7434-A21.dwg”.



Image showing the 2004 Master Plan drawing (pink) repositioned per MGA 56 GDA2020 coordinates and aligned with the Aerometrex 3d model. The massing model “CCPR-BYD-LA-000002_2006 Massing.fbx “ (grey) was then aligned with the above drawing.

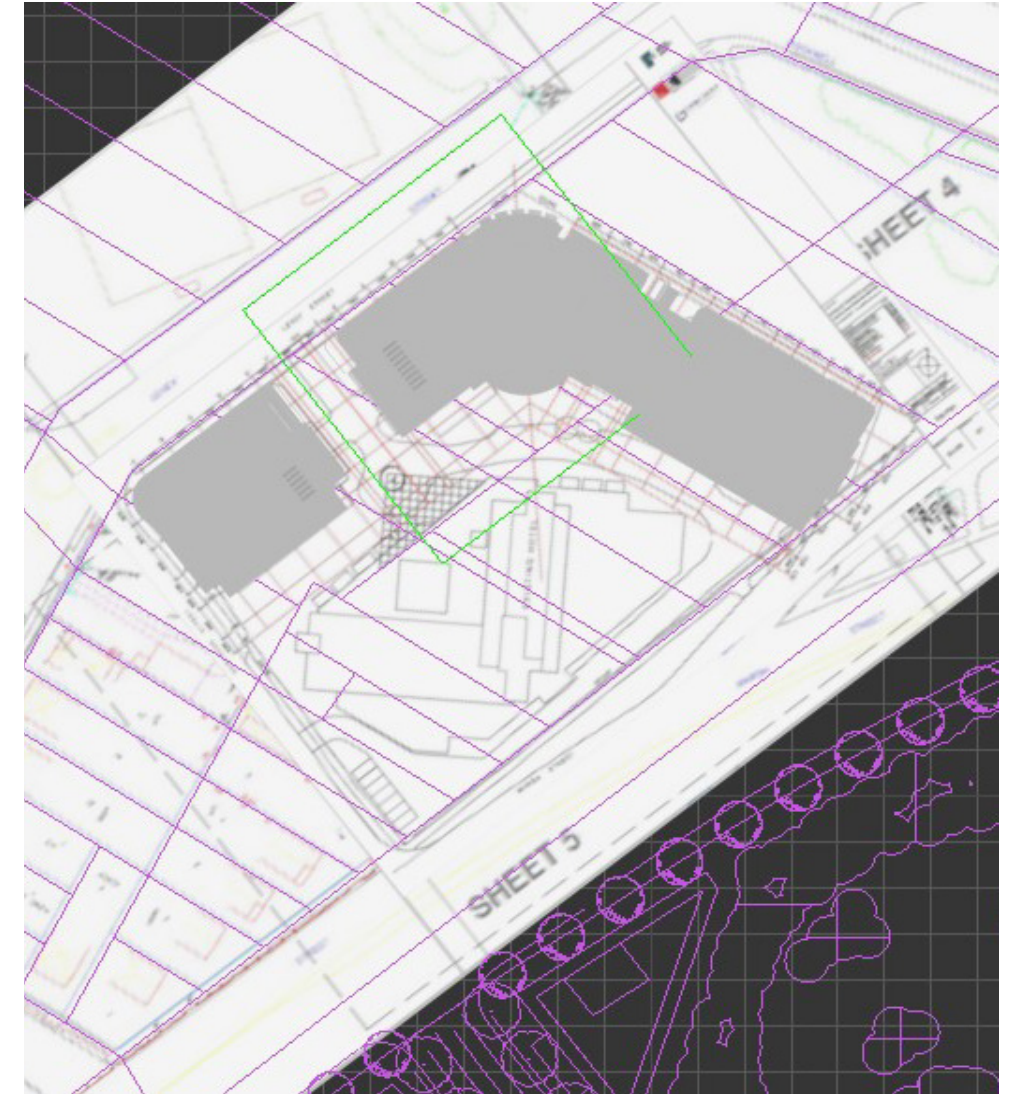


Image showing the site plan drawing “DW00 Site Plan.pdf” (white background image) at MGA 56 GDA2020 coordinates aligned to the 2006 master plan drawing “PSA7434-A21.dwg” (purple). This image also shows the Southbank building model (grey) aligned to the site plan drawing “DW00 Site Plan.pdf”.

3.3 RENDER CREATION

3D cameras were positioned in the 3D model on Level 08 of the most eastern Southbank building on a balcony facing north-east and a balcony facing south-west to show the view impact of the various schemes. Once cameras were positioned, we added lighting to the 3D scene.

A digital sunlight system was added in the 3D scene to match the lighting direction of the sun in Sydney, Australia. This was done using the software sunlight system that matches the angle of the sun using location data and time and date information.

For the renderings, we applied a basic grey material to the proposed massings and a dotted green line to indicate the 2004 Height Control information.



Image showing 2004 height control drawing (pink) at MGA 56 GDA2020 coordinates aligned to Aerometrex and 3D Approved Massing model (red). Image also shows Current Concept Masterplan Model (grey).

4. MAP OF 3D CAMERA LOCATIONS

PLAN ILLUSTRATING CAMERA LOCATIONS FOR VIEW IMPACT RENDERS OF COOKS COVE, 19 MARSH ST. ARNCLIFFE NSW 2205

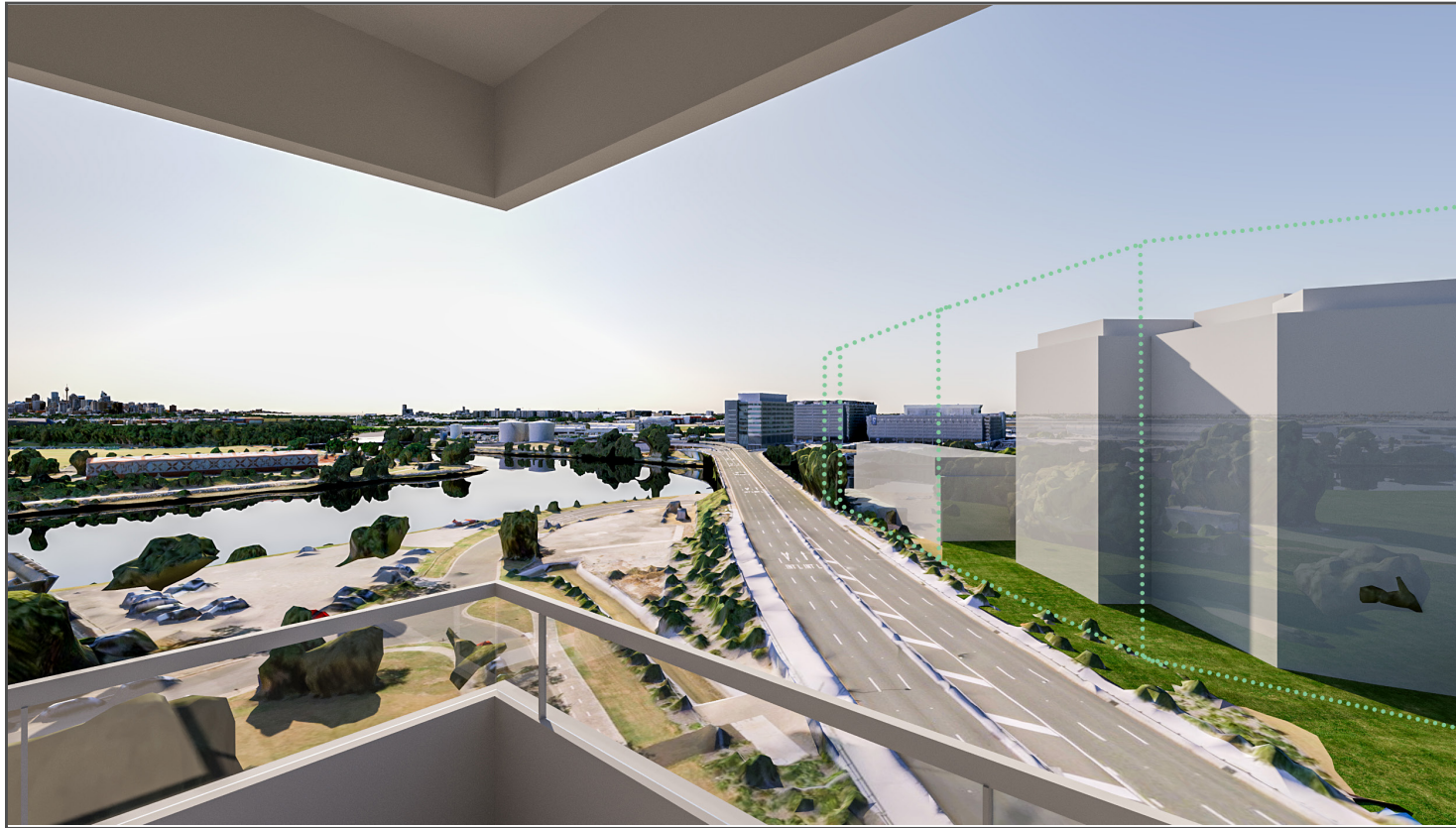


Camera Positions

- 1. Position 1 - Southbank Building Level 8 facing North-East (RL28.5 m)
- 2. Position 2 - Southbank Building Level 8 facing South-West (RL28.5 m)

5.1 CAMERA POSITION 01 - SOUTHBANK BUILDING, FACING NORTH-EAST, RL 28.5m

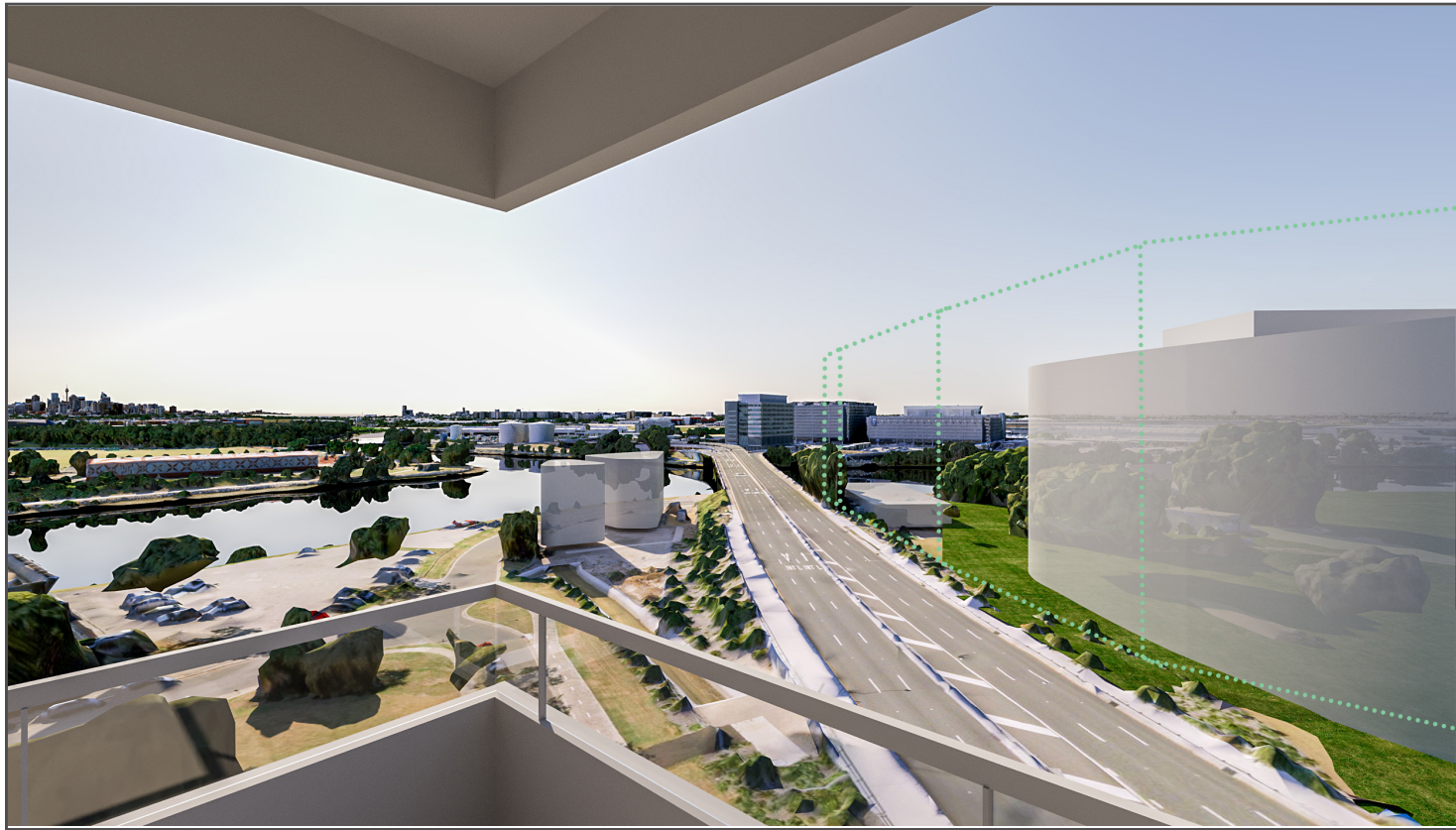
RENDER FROM 3D MODEL SHOWING 2006 MASTERPLAN MASSING AND 2004 HEIGHT CONTROLS






CAMERA POSITION



RENDER FROM 3D MODEL SHOWING CURRENT MASTERPLAN MASSING AND 2004 HEIGHT CONTROLS



-  2006 Masterplan Massing and Current Masterplan Massing (shown as translucent grey volumes in both the top left and bottom left images)
-  2004 Height Controls (shown as dotted green line in both the top left and bottom left images)
-  Cooks Cove Site (orange overlay in top right image)

5.1 CAMERA POSITION 01 - SOUTHBANK BUILDING, FACING NORTH-EAST, RL 28.5m

RENDER FROM 3D MODEL SHOWING 2006 MASTERPLAN MASSING AND 2004 HEIGHT CONTROLS

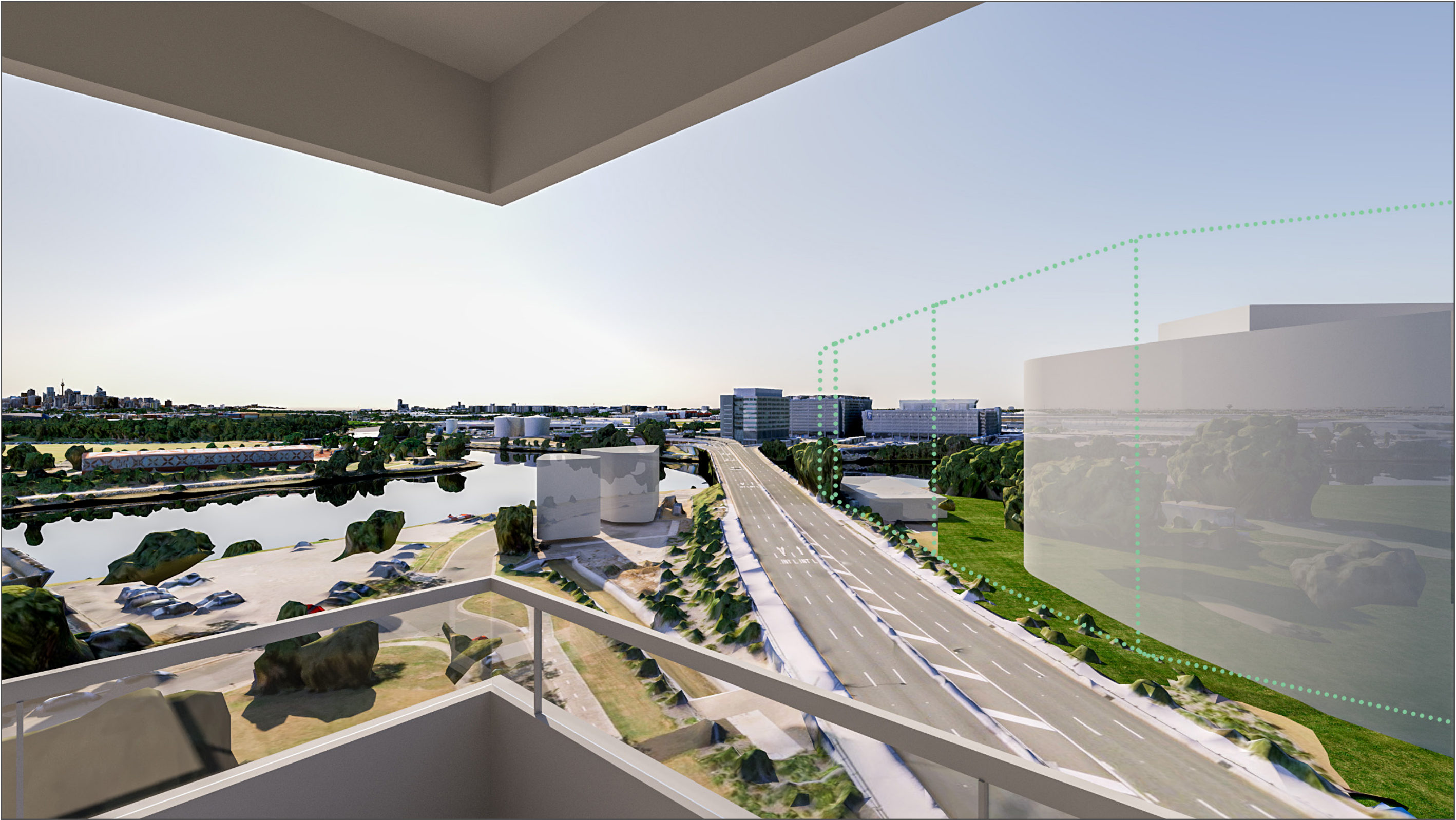


2006 Masterplan Massing (shown as translucent grey volumes)

2004 Height Controls (shown as dotted green line)

5.1 CAMERA POSITION 01 - SOUTHBANK BUILDING, FACING NORTH-EAST, RL 28.5m

RENDER FROM 3D MODEL SHOWING CURRENT MASTERPLAN MASSING AND 2004 HEIGHT CONTROLS

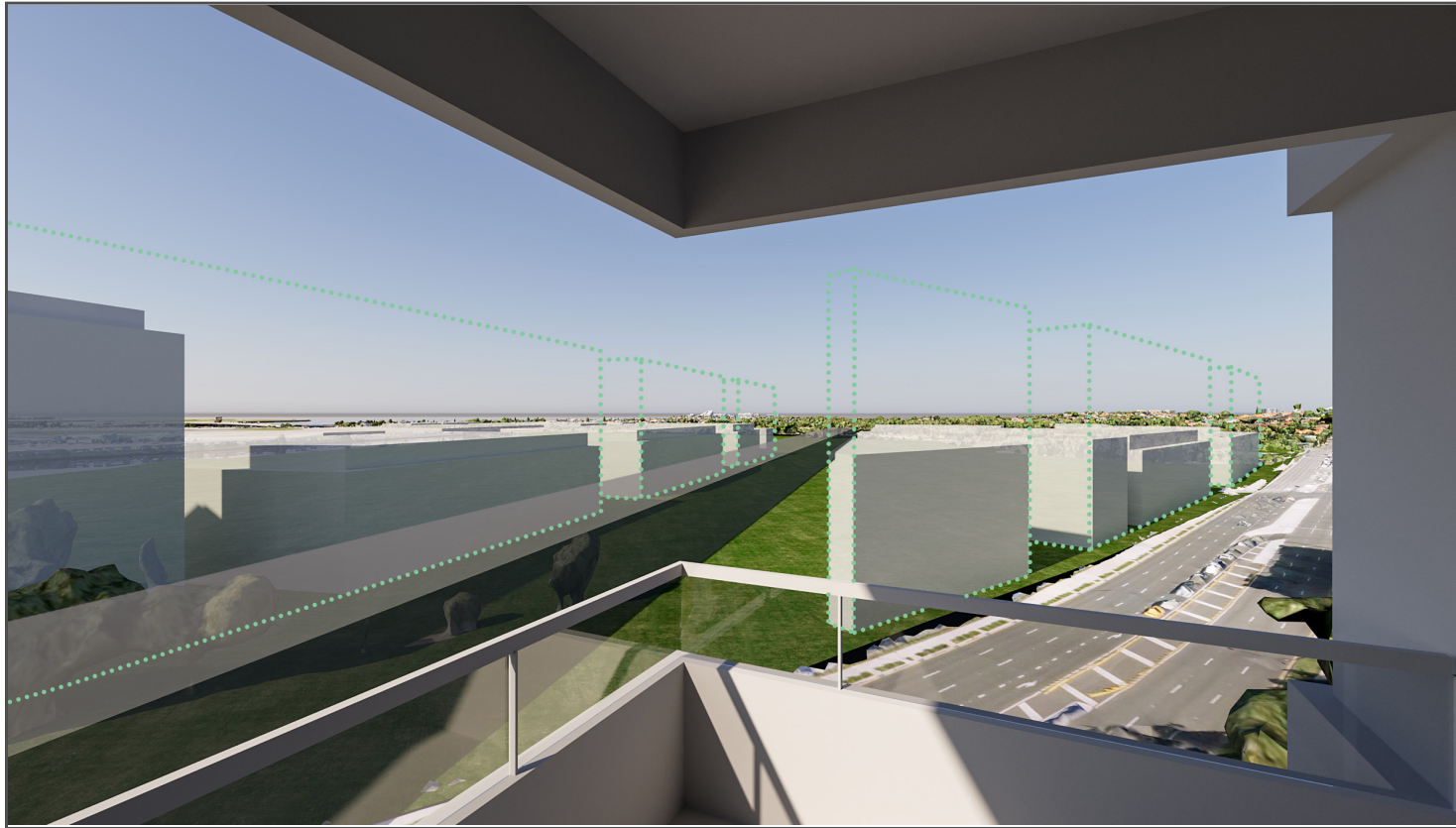


Current Masterplan Massing (shown as translucent grey volumes)

2004 Height Controls (shown as dotted green line)

5.1 CAMERA POSITION 02 - SOUTHBANK BUILDING, FACING SOUTH-WEST, RL 28.5m

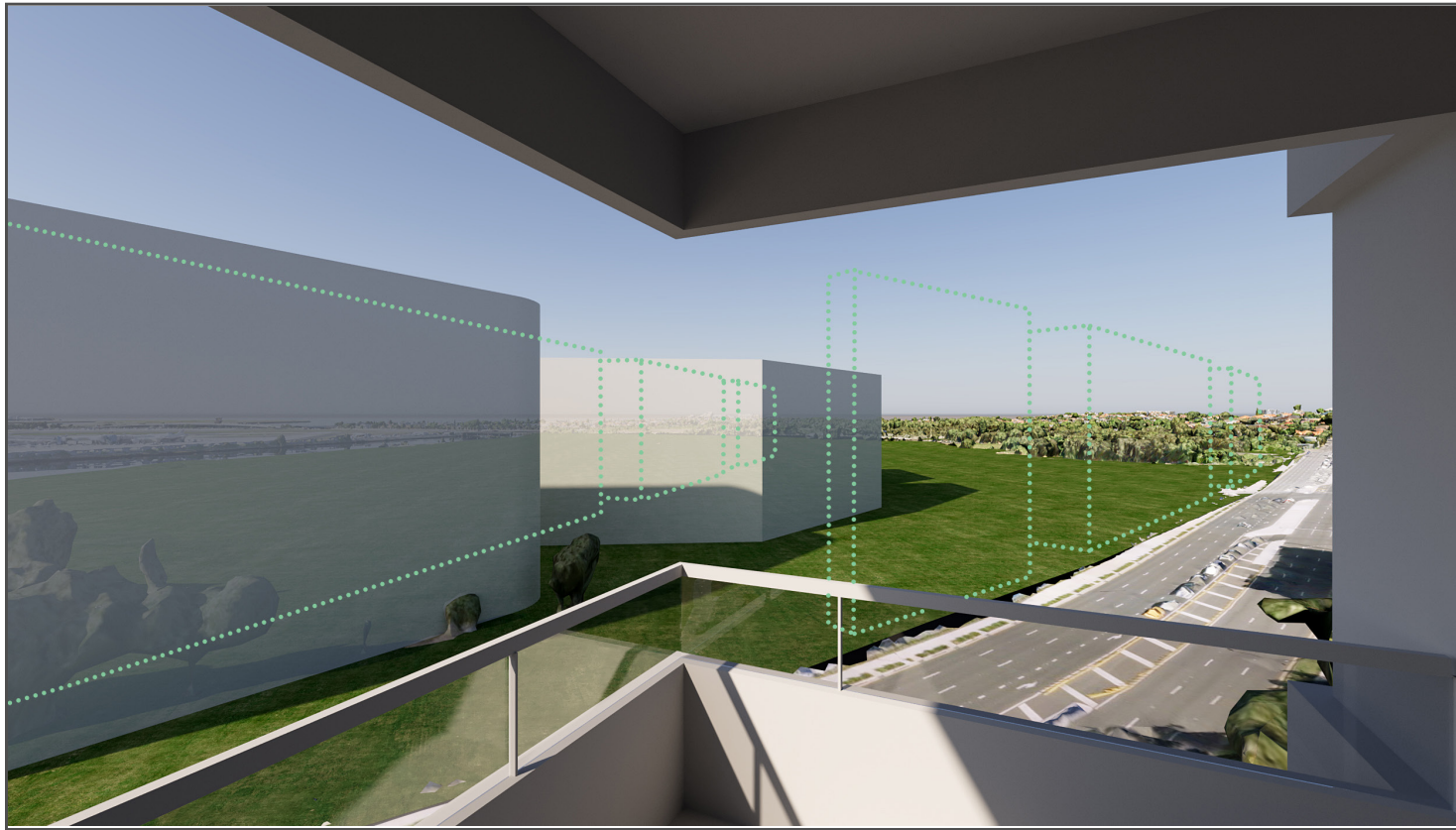
RENDER FROM 3D MODEL SHOWING 2006 MASTERPLAN MASSING AND 2004 HEIGHT CONTROLS







CAMERA POSITION



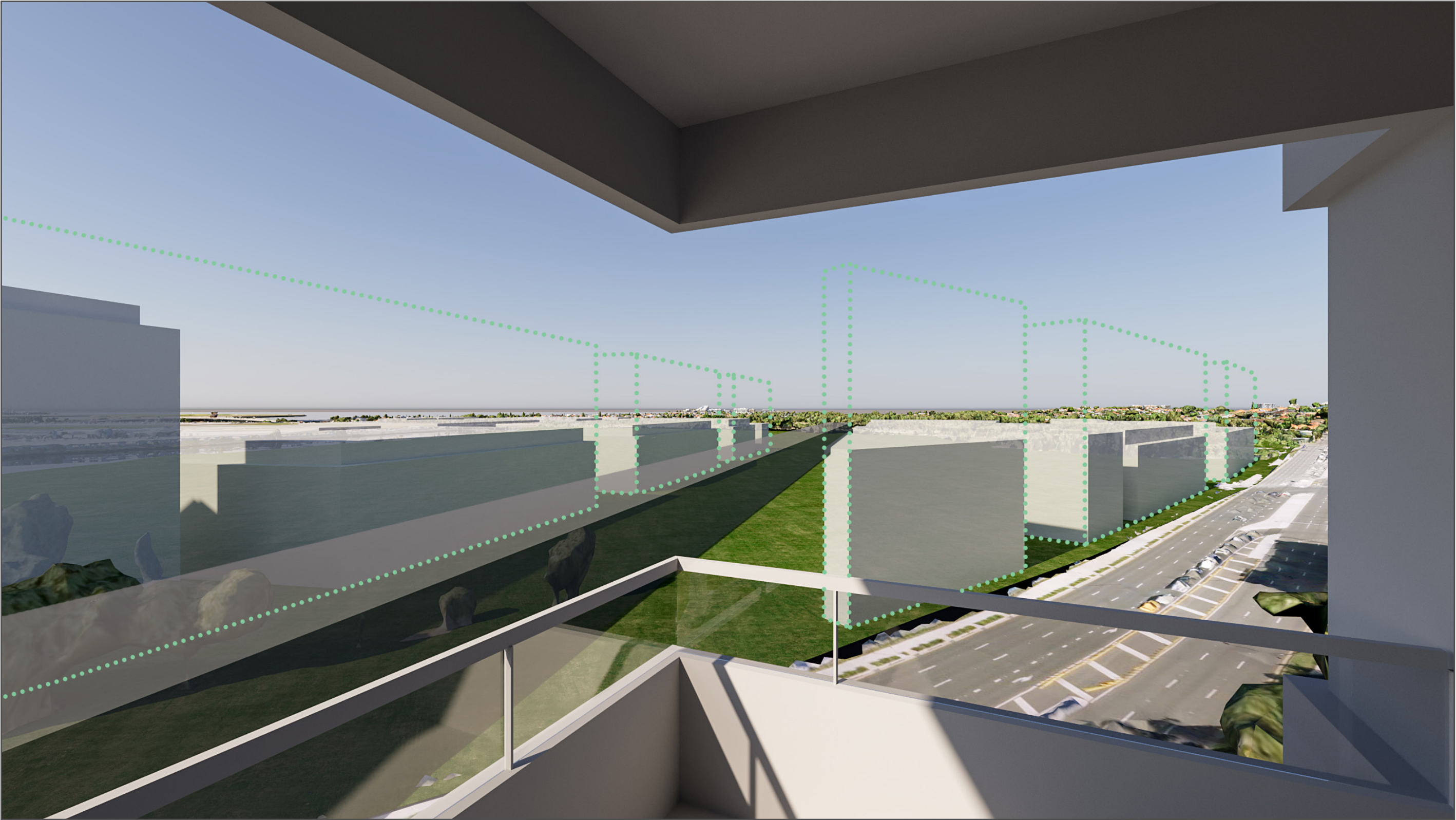
RENDER FROM 3D MODEL SHOWING CURRENT MASTERPLAN MASSING AND 2004 HEIGHT CONTROLS



-  2006 Masterplan Massing and Current Masterplan Massing (shown as translucent grey volumes in both the top left and bottom left images)
-  2004 Height Controls (shown as dotted green line in both the top left and bottom left images)
-  Cooks Cove Site (orange overlay in top right image)
-  Massing of proposed freeway designation (darker grey volume in top left image)

5.1 CAMERA POSITION 02 - SOUTHBANK BUILDING, FACING SOUTH-WEST, RL 28.5m

RENDER FROM 3D MODEL SHOWING 2006 MASTERPLAN MASSING AND 2004 HEIGHT CONTROLS



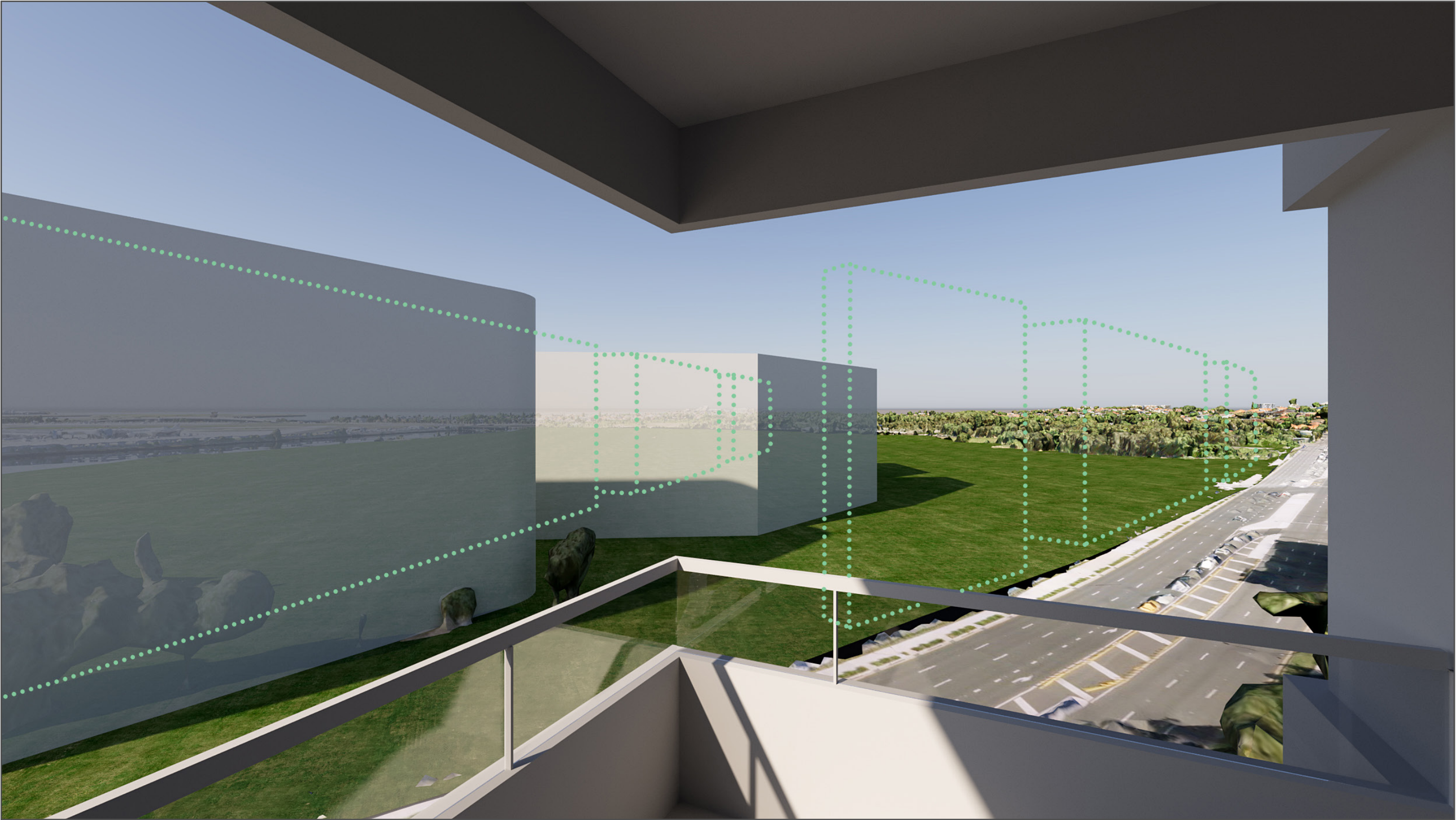
2006 Masterplan Massing (shown as translucent grey volumes)

2004 Height Controls (shown as dotted green line)

Massing of proposed freeway designation (darker grey volume)

5.1 CAMERA POSITION 02 - SOUTHBANK BUILDING, FACING SOUTH-WEST, RL 28.5m

RENDER FROM 3D MODEL SHOWING CURRENT MASTERPLAN MASSING AND 2004 HEIGHT CONTROLS



Current Masterplan Massing (shown as translucent grey volumes)

2004 Height Controls (shown as dotted green line)

6.1 3D SCENE DATA SOURCES

A.1a - 2004 Height Controls Massing Model - refer to Appendix A for details

File Name: CCPR-BYD-LA-000002_2006 Massing.fbx
Author: HASSELL
Format: FBX export from Revit
Alignment: Aligned to MGA 56 GDA2020 via Appendix C

A.1b - 2006 Concept Masterplan Model - refer to Appendix B for details

File Name: PSA7434-A21.dwg
Author: HASSELL
Format: Autocad DWG
Alignment: Aligned to MGA 56 GDA2020 via Appendix C

A.2 - Current Concept Masterplan Model - refer to Appendix C for details

File Name: CCPR-BYD-LA-000002.dwg
Author: HASSELL
Format: Autocad DWG
Alignment: Aligned to MGA 56 GDA2020 via Appendix C

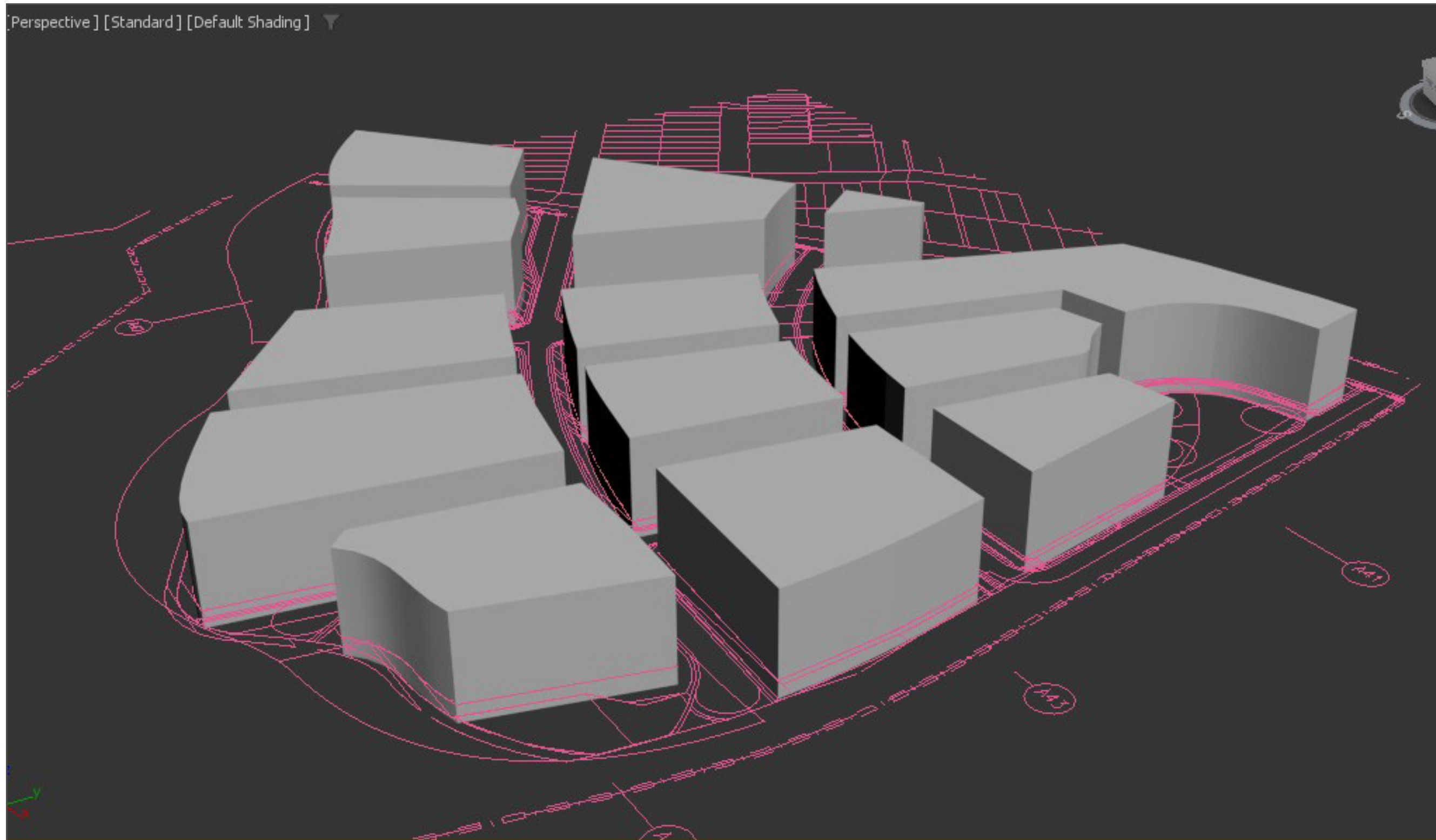
A.3 - Aerometrex 3D Data - refer to Appendix D for details

Author: Aerometrex
Format: FBX
Alignment: MGA 56 GDA2020

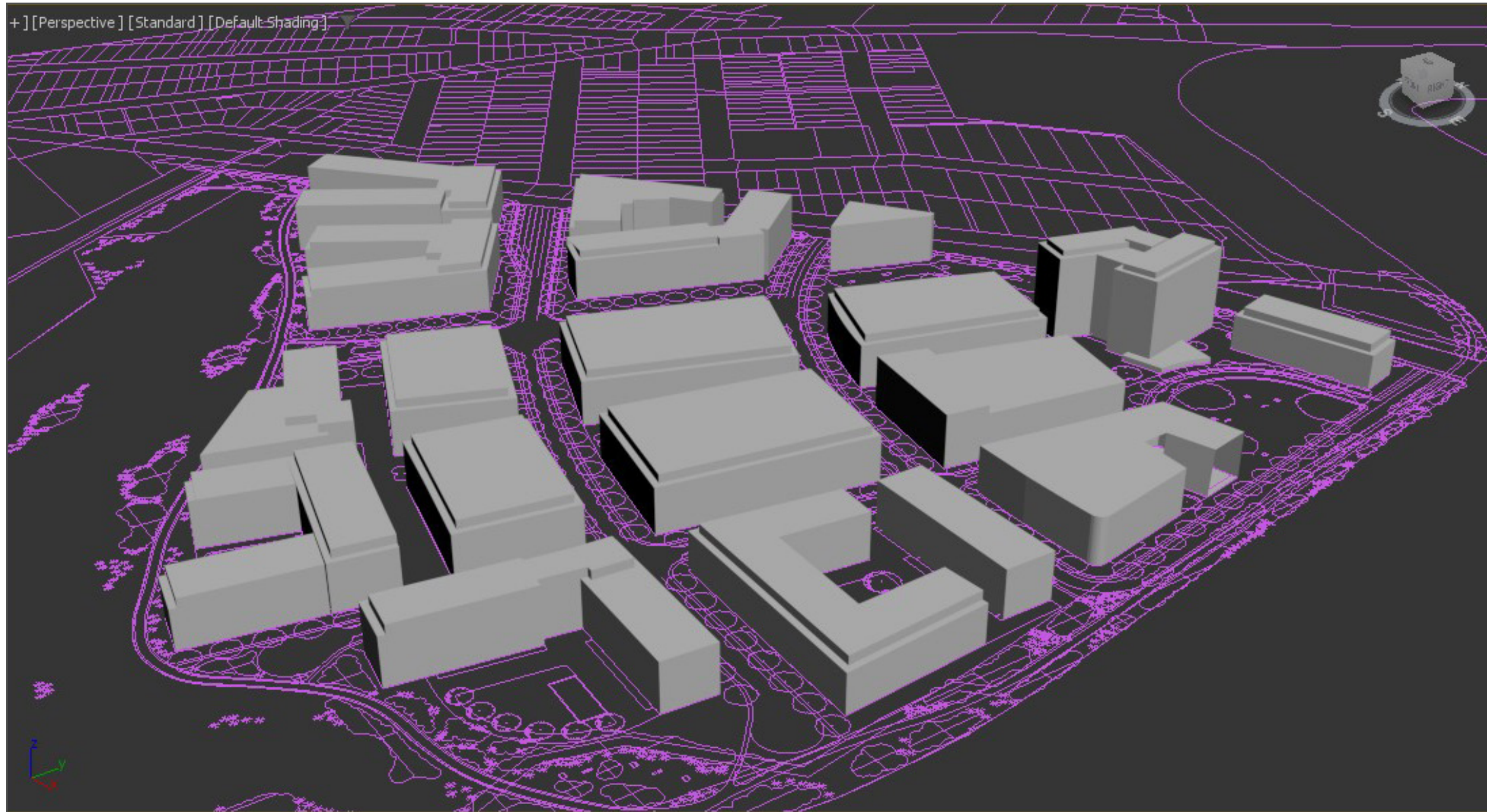
A.4 - Southbank Building Model - refer to Appendix E for details

File Name: BLD_Southbank.max
Author:
Format: 3ds max
Alignment: Aligned to MGA 56 GDA2020 via Appendix E

6.2 APPENDIX A: 2004 HEIGHT CONTROLS SUPPLIED BY HASSELL



6.3 APPENDIX B: 2006 MASTERPLAN MODEL SUPPLIED BY HASSELL



6.4 APPENDIX C: CURRENT CONCEPT MASTERPLAN SUPPLIED BY HASSELL



6.5 APPENDIX D: DETAILS OF AEROMETREX 3D MODELS USED FOR CONTEXT PURPOSES



Sydney 75mm - 3D MODEL

Aerometrex Project Number: A5673

Aerial Survey Acquisition Dates: 4th, 10th, 11th and 12th February 2019

Number of frames captured: 127,250

Capture Pixel Size: 7.5 cm GSD

Horizontal Datum: Geocentric Datum of Australia 1994 (GDA94)

Vertical Datum: Australian Height Datum (AHD)

Map Projection: MGA Zone 56 (MGA56)

FBX Offsets: X= 313,000 Y= 5,236,000

Spatial Accuracy – XYZ: Derived controls from 10cm Photogrammetric surveying – 25cm absolute accuracy

Data Summary:

- **FBX Tiles** – 3D mesh tiles in FBX format split into their Level of Details. Please refer to the associated *metadata.xml* and *Tile_Index.kml* folder for global offsets and tile extents respectively.

Please note there are different directories for different Level of details meaning L19 is typically the highest level of resolution and geometry and every Level down the geometry gets simplified as well as the texture resolution.

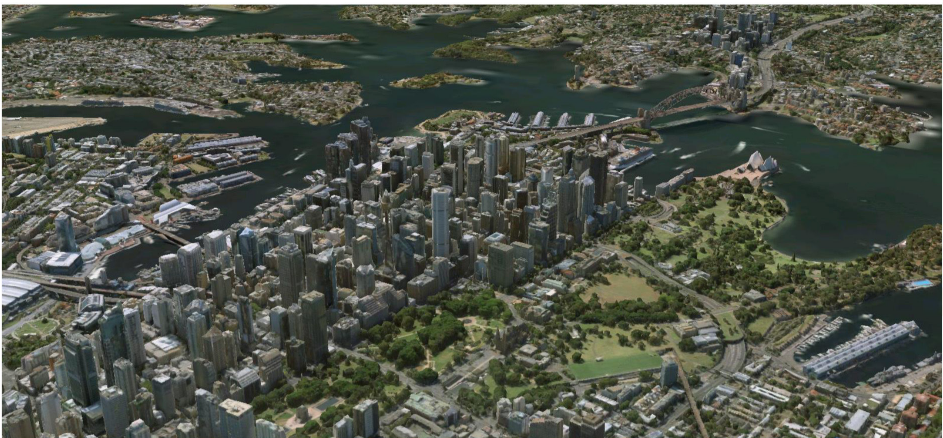


Figure 1: Sydney 2019 3D Model example



Figure 2: Sydney 2019 3D Model example

Any queries/feedback please contact Aerometrex - Adelaide
ph +61 8 8362 9911



6.2 APPENDIX E: 3D MODELS SUPPLIED BY

